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Austria ...	Sch. 20	Indonesia ...	Rp 2500	Portugal ...	Esc 90
Bahrain ...	Din 0.650	Italy	L 1500	S. Arabia ...	Rls 6.00
Belgium ...	BFr 45	Japan	Y550	Singapore	S$ 4.10
Canada ...	C$1.00	Jordan ...	Fils 500	Spain	Pta 125
Cyprus ...	C£0.70	Kuwait ...	Fils 500	Sri Lanka ...	Rup 30
Denmark ...	Dkr 8.00	Lebanon .	£L 25.00	Sweden	Skr 7.00
Egypt	E£1.00	Luxembourg	LFr 45	Switzerland	SFr 2.20
Finland ...	Fmk 6.50	Malaysia .	Rgt 4.75	Taiwan ...	NT $85
France ...	Fr. 6.00	Mexico ...	Pes. 300	Tunisia ...	Din 0.600
Germany .	DM 2.20	Morocco .	Dh 6.00	Turkey	L 250
Greece ...	Dr 80	Netherlands .	Fl 2.75	U.A.E. ...	Dh 6.50
Hong Kong	HK$ 12	Norway ..	Nkr 7.00	U.S.A. ...	$1.00
India ...	Rup 15	Philippines	Pes. 20		

FINANCIAL TIMES

EUROPE'S BUSINESS NEWSPAPER

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Assad loses his magic touch, Page 5

World news — Business summary

W. German radiation leak 'cover-up'

THE BELATED revelation of a small radiation leak from a West German nuclear plant a week after the Chernobyl disaster in the Soviet Union has sparked a bitter row between the Social Democrat government of the state and the VEW electrical utility.

The leakage occurred on May 4 at a high-temperature reactor at Hamm in North Rhine-Westfalia, and according to Mr Reimut Jochimsen, the state economics minister, a cover-up had been attempted and the incident was not properly reported.

Both charges were angrily rejected by VEW, but news of the mishap only emerged on Friday, the same day that the reactor was switched off for "routine maintenance." Experts from the state government are investigating the incident, and regional authorities said the plant would remain shut down indefinitely. **Nuclear industry survey, Pages 11–14.**

Anti-nuclear march

Women and children led a crowd of nearly 2,000 people who marched through Krakow, Poland, in protest over contamination from the Chernobyl nuclear accident in the Soviet Union.

Radiation warning

Italians in the northern province of Como have been warned against eating rabbit or poultry after local tests indicated that radiation levels were still above normal following the nuclear accident at Chernobyl in the Soviet Union a month ago.

Lockout averted

Swedish public-sector employers have withdrawn their threat to lock out more than 35,000 teachers and 15,000 local-authority employees in a first conciliatory gesture aimed at cooling the inflamed atmosphere in the Swedish labour market. **Page 2**

Blow to Solidarity

Fugitive Solidarity leader Zbigniew Bujak, the most senior figure in the banned movement to evade capture since the 1981 Polish martial law clampdown, was arrested and faces trial on charges of anti-state activity. **Page 2**

Syria-Iraq talks

Senior officials of Iraq and Syria will meet later this month to pave the way for a reconciliation summit between their leaders, according to the Al-Ittihad newspaper. **Talks on pipeline, Page 3**

Border killing

An East German who tried drive into Syria from Turkey without stopping for a check was shot dead by Turkish gendarmes near the town of Reyhanli, the Anatolian News Agency reported.

Kohl plea to Reagan

West German Chancellor Helmut Kohl has appealed to President Reagan to help arrange the release of eight West Germans held by US backed rebels in Nicaragua, a foreign ministry spokesman said.

Iranian tanker hit

An Iranian-chartered supertanker, the Liberian-flag Heliespont Enterprise, was crippled by an Iraqi missile attack in the northern Gulf. The crew abandoned ship as the 150,518-ton vessel was set ablaze.

Beirut clashes

Heavy fighting flared between Shia Amal militiamen and Palestinians defending three big refugee camps in Beirut, breaking a truce negotiated by Algerian and Iranian diplomats.

Kampala curfew

The Ugandan Government clamped a night curfew on Kampala as government troops cracked down on illegally held arms in the capital. Radio Uganda said the curfew would last until Tuesday.

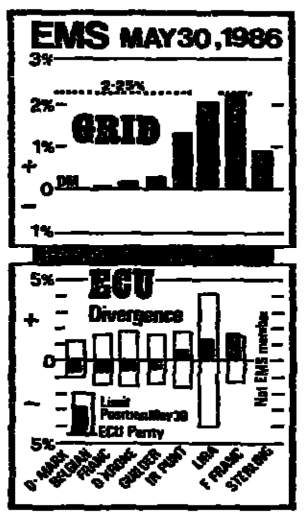
Hussein in France

King Hussein of Jordan is due in France for a three-day visit on his way to the US and Britain

Wells Fargo to lay off 5,000

WELLS FARGO, San Francisco-based banking group which completed its $1.07bn purchase of Crocker National from Midland Bank of the UK on Friday, plans to reduce the combined banks' 26,000-strong workforce by 5,000 over the next two years – beginning with 1,600 immediate layoffs. **Page 20**

EUROPEAN Monetary System: The French franc and the Italian lira remained at the top of the EMS last week. Apart from the Irish punt the other EMS currencies were weak, with the D-Mark staying under some pressure against the French franc. The French currency finished around its EMS ceiling of DM 31.410 per 100 francs in Frankfurt on Friday. The Belgian National Bank again cut its discount rate last week, by ½ per cent to 8 per cent, bringing the total reduction in the rate to 1¾ percentage points since the realignment ot the EMS in early April.



The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rates from which no currency (except the lira) may move more than 2¼ per cent. The lower chart gives each currency's divergence from its "central rate" against the European Currency Unit (ECU), itself a basket of European currencies.

EEC, US and Japan will lose 250,000 steel industry jobs by 1995 due to competition from new mills in South Korea and Brazil, according to a study by Chase Econometrics.

EEC imposed a 13 per cent tariff on methanol imports from Bahrain.

IRI, Italian state industrial holding company whose major activities include steel, telecommunications equipment and services, engineering and Alitalia, the state airline, cut its industrial losses from L2,274bn ($1.4bn) to L1,592bn in 1985.

IRAQ has sent a delegation to Damascus to discuss reopening the Iraq-Syria oil pipeline.

ISRAEL and the US are in the final stages of negotiations on a re-equipment programme for the Israeli navy at an estimated cost of almost $1bn. **Page 20**

CZECHOSLOVAKIA and China signed an agreement to share research on science and technology.

BANK of Israel called on the Government to reduce Israel's high personal income tax and to open up domestic capital markets to the private sector. **Page 3**

SYRIAN foreign exchange reserves have fallen to about $100m, enough to cover two weeks' imports, according to a Syrian central banker. **Page 3**

ELF AQUITAINE Norge, Norwegian off-shoot of the French petroleum and industrial group, and Saga Petroleum, independent Norwegian oil company with stakes in most of the country's most promising off-shore discoveries, said they had been discussing a possible merger. **Page 22**

SOUTH KOREAN Government has taken another major step to rationalise insolvent companies with an announcement of nine corporate takeovers. **Page 21**

New Soviet arms proposal faces rejection by US

BY NANCY DUNNE IN WASHINGTON

MR Caspar Weinberger, the US Defence Secretary, yesterday reacted sceptically to a new Soviet arms-control proposal, presented privately to the US last week in Geneva, which could prevent deployment of a US space-based missile defence system.

The new Soviet proposal, apparently prepared before President Ronald Reagan last week announced his intention to withdraw from the Salt 2 arms treaty at the end of the year, is reported to have called for a reduction of strategic nuclear forces to be tied to a strengthening of the Anti-Ballistic Missile (ABM) treaty and a commitment that neither side would withdraw from the pact for 15 to 20 years.

The US would therefore be able to carry out some research and testing for its Strategic Defence Initiative but would be prevented from actually deploying a space-based missile defence.

Mr Weinberger said he would oppose any agreement that would prevent research, development and ultimately deployment of SDI. Both he and Mr George Shultz, the Secretary of State, who also appeared on US television yesterday, said they had not actually seen the Soviet proposals.

They cited, however, Soviet violations of the current ABM treaty, including a missile defence system around Moscow and the building of a radar station at Krasnoyarsk in Siberia.

Mr Shultz seemed more inclined to study the new proposals before making up his mind. The US, he said, had "repeatedly stated our intention to observe the ABM treaty terms and we have called on the Soviet Union to do so."

The Administration, he pointed out, had chosen to accept a narrow interpretation of the treaty, rather than a broader review which had been urged by some hawks to allow more latitude for SDI.

The current ABM treaty allows each side to withdraw from the pact giving six months' notice that it has "jeopardised its supreme interest."

Mr Weinberger said the proposals from the news stories published in the New York Times did not appear to be new. "They want the US to give up the SDI . . . I do not want to ever agree to anything which attempts to define on their terms research or deployment of SDI."

Mr Shultz said that the US, while abandoning Salt 2 limits, would exercise "thoughtful restraint" and would deploy no more new missiles than the Soviets had. In response to the Moscow threat on Saturday that it would build up its nuclear forces beyond the limits of Salt 2 if the US did, the Secretary insisted that the Soviets had already "broken out of Salt 2" in building 72 SS-25 missiles.

Mr Weinberger said the US could agree to abide by Salt 2 if the Soviets agreed to take out their new SS-25s. But, he added, the US needed to have very accurate verification arrangements and the Soviet Union had never agreed to that.

Both officials yesterday emphasised the Administration's current line that the US must regain a sufficient modern deterrent force even if that required it to move outside the "very artificial limits" set by Salt 2. Mr Weinberger said the US would violate Salt 2 when it deployed air-launched cruise missiles.

Our Moscow Correspondent adds: The Soviet Union strongly condemned President Reagan's threat to abandon the Salt 2 treaty and served notice at the weekend that Moscow would follow suit. Mr Reagan's threat was an "exceptionally dangerous measure," according to a government statement, which did nothing to improve prospects for a superpower summit.

Policing the policemen, Page 18

Italian economy 'held back by public debt'

BY JAMES BUXTON IN ROME

DR CARLO Azeglio Ciampi, governor of the Bank of Italy, has administered a carefully measured dose of cold water to the public euphoria over Italy's economic prospects following the fall in the oil price.

He reminded the country's leading entrepreneurs, bankers and officials, at Saturday's ceremonial reading of his annual report, that the economy was still seriously constrained by the vast public-sector borrowing requirement. Last year growth was only 2.3 per cent, and the public-sector borrowing requirement accounted for 16.1 per cent of gross domestic product.

The need for action to restore sound public finance was urgent, he said. The national debt was still growing faster than national income. He said: "Rather than falling, the public-sector deficit, net of interest payment, increased in 1985."

Dr Ciampi said that to guarantee stability, balanced growth and social progress Italy needed a budget that "has been reduced to normal proportions in relation to national income, modified in composition and restored to its function as an instrument of economic policy."

Dr Ciampi said he envisaged four per cent growth in domestic demand this year and 3 per cent real GDP growth. Employment would increase by 200,000 jobs while lower import prices would put the current account, which closed last year with a deficit of L8,000bn ($5.1bn), into surplus and would assist the fall in inflation, currently around 6 per cent.

Similar average annual figures for the growth of GDP and employment were indicated by a central bank study for the 1986–88 three-year period. This assumed an oil price in the $15 to $20-a-barrel range, he said.

However, although the study showed a fall in inflation, it would not be enough to wipe out the inflation differential between Italy and its competitors. The growth of employment would not be enough to match the growth of the labour force.

Dr Ciampi pointed out that the fall in oil prices had been caused partly by "random forces" and might therefore be "reversible to some extent."

Recent economic data showed that, countries that had defeated inflation an apparent reference to West Germany and Japan "are being slow to realise the growth potential created by the fall in oil prices." He called on them to accelerate their economies.

He regarded the fall in the oil prices and the dollar as "an opportunity to ease the constraint on balanced growth that must not be missed."

Monetary policy, the responsibility of the Bank of Italy, had little room for manoeuvre, said Dr Ciampi. The Treasury needed to issue an average of about L32,000bn of debt every month for the remainder of this year to cover new financing needs and to renew maturing securities.

"Should even a 10th of that amount fail to be subscribed, the consequence to Treasury drawings on its overdraft with the Bank of Italy could cause bank liquidity approximately to double, once again raising problems of monetary control," he said.

The Bank chief said that industry should invest its higher profits in new productive capacity. Industrial capacity in 1985 was lower than in 1980, and investment had been made to increase productivity in existing plants at the expense of new investment in southern Italy.

Small accountants' partnership to challenge international firms

BY ANDREW BAXTER IN LONDON

SAFFERY CHAMPNESS, a medium-sized UK accountancy firm whose clients include MCC and landed gentry, has launched an international partnership of 20 accountancy groups to offer clients an alternative to the Big Eight companies which dominate the profession worldwide.

The unusual new grouping, SC International, brings together small and medium-sized firms in 19 countries as far apart as Sweden and New Zealand; and aims to offer clients a personal service worldwide while maintaining each member's independence.

The move, which follows an intensive two-year search for partners by Mr Michael Dawson, Saffery's chairman, will enable Saffery and other member firms to handle their clients' international business without having to refer them to the major accountancy groups.

Mr Dawson, speaking in London on Friday at the inaugural meeting of the association, said Saffery had discovered that "dependence on the assistance and services of the larger, etablished firms in those parts of the world where we were not represented did not provide a satisfactory solution, and to some extent, could be a threat to our own livelihood."

Saffery Champness, formed four years ago from a merger of two of the City's oldest accountancy firms, ranks 28th in the UK with more than 200 partners and staff and a client list including wealthy individuals, small businesses and medium-sized public companies.

The new association, which is an umbrella organisation rather than a legal entity, will allow its members to refer clients' business to a expert in the country concerned without having the expense of setting up their own offices worldwide.

Apart from Saffery, the other major participant in SC International is J.H. Cohn & Company, a New Jersey-based firm which ranks 24th in the US. The company, founded in 1919, has no presence outside the US, and Mr Myles Sachs, a partner, said he hesitated to turn a client's international business over to the major accountancy groups because they are "a little bit voracious."

Many of the other association members are much smaller and could never offer an effective response to their domestic clients' international needs. Members hope the new arrangement will give a significant boost to their revenues as the referral process gets under way.

West's space efforts hit by Ariane loss

BY DAVID MARSH IN PARIS

THE WEST faces a period of several months without satellite launching capacity following the destruction in flight of Europe's French-led Ariane space rocket early on Saturday morning.

The failure resulted in the loss of a $50m satellite owned by the international space communications organisation Intelsat. It has dealt a heavy blow to European space efforts at a time when all US launchers have also been grounded by an unprecedented series of accidents.

The Ariane setback was its fourth on 18 missions – a failure rate which is starting to undermine Europe's credibility as a challenger to the US in the commercial exploitation of space.

The sequence of mishaps with Ariane – the second in four lift-offs since September 1985 – coupled with January's US space shuttle disaster and the subsequent loss of two American unmanned rockets ushers in a new period of uncertainty in the space business.

Ironically, while Western space efforts founder, the Soviet Union has been chalking up further successes. On Saturday two Russian cosmonauts in orbit in the Mir space station since March 13 made their eight space walk.

China has also been trying to plug the gap left by US space problems by offering its Long March rocket for Western satellites. It recently signed a launching agreement with the Texas-based Teresat group.

Mr Frédéric d'Allest, director general of France's national space agency CNES and chairman of Arianespace, the company commercialising Ariane. said yesterday he hoped Ariane flights could resume before the end of the year. French companies and banks are the main shareholders in Arianespace.

Arianespace has captured a series of important satellite launching contracts during the last few weeks to profit from the delay in shuttle launches caused by the Challenger explosion. They included contracts to place in orbit Japanese satellites as well as two British military communications spacecraft. Arianespace has a total order book for 32 satellites, representing fees of FFr 10bn ($1.38bn). The timing of these launches has been thrown into doubt by Saturday's setback.

The Ariane failure came 4 minutes and 36 seconds after lift-off from Kourou in French Guiana. An ignition irregularity in the third stage changed the rocket's trajectory and forced ground controllers to explode it by radio signal at an altitude of 200 km to prevent it from crashing on land.

Continued on Page 20

Doubts on French TV plan, Page 6

EEC set to impose duty on photocopiers

BY JANE RIPPETEAU IN BRUSSELS

THE EUROPEAN Commission is expected this month to impose dumping duties on Japanese photocopiers imported into the EEC, according to executives and analysts in the industry.

An investigation into possible dumping involves about $1bn worth of machines imported annually, making it the largest such case handled by the Commission, according to one official. "It's an extremely complex inquiry," he added.

Duties are not expected to exceed the 35 per cent set last year on imports of Japanese electronic typewriters. The duty is in addition to normal import duties.

The anti-dumping complaint was filed with the European Commission last July by the Committee of European Copier Manufacturers (Cecom). The committee includes Rank Xerox, 51 per cent owned by Xerox of the US, Océ of the Netherlands, Olivetti of Italy, Tetras of France and a private West German company, Develop.

The committee cited Canon, Ricoh, Mita, Fuji Xerox, Sharp and others. In the worst case documented, Cecom said one Japanese producer charged 59 per cent more in Japan than it did in Europe for the same machine. The extra revenue earned at home made it possible for the company to undercut prices in the EEC, Cecom said.

Most companies involved declined comment pending the outcome of the case. However, Ricoh in Japan said: "We believe we are not dumping."

The threat of tariffs has already spurred Japanese producers to form new manufacturing alliances

Continued on Page 20

***How Xerox upped the ante.* Page 18**

World Cup starts with kick in the face for President

By David Gardner in Mexico

TWO GOALS go[illegible] and running in Me[illegible]ed as being of a jubilant, mos[illegible] crowd, which sneaked a goal into own Government's net.

The world's most widely viewed sporting spectacle got off to a near clockwork start on Saturday amid pageant and pomp – marred, from the host country's point of view, by the three long howls of derision directed at President Miguel de la Madrid, from the crowd of 100,000.

From 8am on Saturday, the three main roads towards the south of Mexico City were choked with traffic. A veritable army of police lined each route, doing the Mexican traffic policeman's ineffable personation of an aerobics instructor.

Their efforts were more than usually superfluous, for the traffic was flowing only one way – towards the imposing Azteca stadium and the opening match of the tournament between defending champions Italy and Bulgaria.

Mexicans had taken the build-up to the World Cup very much in their stride, as well they might, plagued by unpayable foreign debts, collapsing oil prices and living standards, and a growing if inchoate unhappiness with a six-decade regime many of them have outgrown. After the misery of last September's lethal earthquakes, it was a close-run thing whether the football tournament would take place here at all.

But on the eve of the opening game, banner-waving people of all classes and ages took to the streets, gathering around the city's main monuments for the sheer pleasure of cheering; and they are still there.

But at 10am, two hours before kickoff, the huge Azteca amphitheatre was roaring and rolling as the crowd performed the jump-up-and-down body "wave" after the fashion of US football and baseball fans.

On the manicured turf, a full repertoire of regional dress and dances – including a rather tricky one with machetes – was exhibited to the accompaniment of Mariachi music. A medieval garbed Florentine troup complete with cannonades gave the proceedings a Renaissance touch while an Aztec ballet whose body-painted members looked remarkably unindigenous performed a ritual to the sun. Mercifully for the players, it was a warm, muggy rather than humid, morning, and there was no sun to worship.

Shortly before play started, huge pinatas – gaudy, suspended hexagons which blindfolded Mexican children traditionally beat open

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CONTENTS

Robert Mauthner on the disagreements highlighted by this weekend's ministerial meeting

Nato fails to release doves of peace

NATO's spring ministerial session, which ended in Halifax, Nova Scotia, at the weekend, was intended to give a new impetus to the West's position in East-West disarmament negotiations. As things turned out, however, the alliance's foreign ministers appeared more adept at shooting themselves in the foot than releasing the doves of peace.

The idea of Lord Carrington, the Nato Secretary-General, to transform the proceedings into an informal exchange of views behind closed doors from the succession of set speeches, aimed at enabling the ministers to arrive at a consensus.

The ensuing frank exchanges did as much to highlight the disagreement between the US and its European and Canadian allies over President Reagan's intention to breach the 1979 Salt 2 Strategic Arm Limitation Treaty than to burnish the West's disarmament image.

Mr Gorbachev: proposals considered meaningless

The "free for all," as it was described by one official, produced one of the hardest-hitting debates in the history of the alliance. At the end of the day, the US position on scrapping Salt 2 had, if anything, hardened, while European opposition to such a move had become more explicit.

Mr George Shultz, the US Secretary of State, went even further than President Reagan had done on the eve of the Halifax meeting to undermine the unratified treaty. Mr Reagan, at least, left open the theoretical possibility that Washington would respect its limits if the Soviet Union had taken steps by the autumn to put an end to its perceived violations of Salt 2.

However, in describing the treaty as "obsolete" and in need of replacement by new arrangements which would put the emphasis on limiting warheads rather than missiles, Mr Shultz appeared to hammer the final nail in its coffin.

On previous occasions, Mr Shultz, as distinct from the hard-liners in the US Administration like Mr Caspar Weinberger, the Defence Secretary, lent a sympathetic ear to the European's views on Salt 2. This time, their argument that a flawed treaty was better than none at all, appeared to fall on deaf ears.

The disagreement over Salt 2 and its implications for the future of East-West disarmament negotiations overshadowed a determined attempt by the Nato ministers to win back some of the lost ground in the propaganda battle over disarmament with the Soviet Union.

It was the widely-held view of ministers—and Sir Geoffrey Howe, the British Foreign Secretary, in particular—that Mr Mikhail Gorbachev, the Soviet leader, had been allowed to score too many points with vaguely-worded proposals which, however attractive they might sound to the uninitiated, were meaningless in practice.

The West must become more skilful in presenting its case, Sir Geoffrey and others argued. The Western allies had, after all, already tabled what was in effect a five-point world disarmament plan. This included a 50 per cent cut in strategic nuclear arsenals, the elimination of intermediate-range nuclear weapons, a world-wide ban on chemical weapons, the reduction of conventional forces in Europe and wide-ranging confidence-building measures to reduce the risk of war.

The creation of a Nato task force to flesh out Western proposals for conventional arms control is intended to reflect the allies' new dynamic attitudes to disarmament and the public relations battle surrounding it. Unfortunately, many people feel that it may need another task force to patch up the current disagreement between the US and its allies and the damage these have done to Nato's image.

Portuguese premier wins strong backing from party

BY DIANA SMITH IN LISBON

PORTUGAL'S SOCIAL Democrat premier, Professor Anibal Cavaco Silva, has received overwhelming support from the annual congress of his minority party for his tough style of government.

The 12-year-old Social Democrat Party (PSD) was a collection of squabbling factions until it was tamed by Prof Cavaco Silva after his surprise victory in the May, 1985 contest for party leadership.

The few PSD members still resistant to Prof Cavaco Silva's hard-headed approach to the party and to government seem to have accepted that there is little use trying to make their voices heard above the chorus of enthusiasm, and stayed away from the Congress.

After seven months of government, the Cabinet faces some of its toughest parliamentary tests: its proposed reforms of rigid labour laws; drastic streamlining of a debt ridden public sector; and liberalisation of the media.

The congress fully supported the Prime Minister's refusal to seek pragmatic alliances, and appears to believe that the party is heading for an outright majority at the next general election.

Gonzalez forecast to win poll

BY DAVID WHITE IN MADRID

SPAIN'S GENERAL election in three weeks' time is expected to produce a repeated outright majority for the socialists, a loss of ground by Mr Manuel Fraga's conservatives and a strong comeback by the former centrist Prime Minister, Mr Adolfo Suarez, according to the first independent opinion poll published yesterday.

The poll, carried out for the Madrid Daily El Pais, shows Mr Felipe Gonzalez's socialist party winning 46 per cent of the vote, compared with 47.1 per cent in its spectacular victory four years ago.

This would be enough to give it between 194 and 210 members of the 350 seat congress, in line with its present 202. The party would also maintain its control of the senate.

The main surprise of the poll is the eight per cent given to Mr Suarez's Democratic and Social Centre (CDS), a splinter of Spain's former ruling party, the now disbanded UCD.

This could make it the third largest party in congress, with 15 to 19 seats, compared with its present two.

His rival for the national centrist vote, the recently created Democratic Reformist Party (PRD) is shown by contrast as obtaining only one or two seats, falling well below its ambitions. The PRD is considered the main novelty in the June 22 contest. But the PRD's powerful sister party in Catalonia, the moderate Catalan nationalist Convergencia i Unio, is expected to increase its vote.

Its counterpart in the Basque country, the Basque Nationalist Party (PNV), is also seen gaining some support, increasing its lead over the socialists in the region, and keeping its eight seats.

The far left Basque parties are equally shown increasing their share of the vote.

The poll indicates a substantial increase in the abstention rate to between 25 and 30 per cent, compared with 20 per cent in the 1982 elections.

Belgian unions plan more action against cuts

By Quentin Peel in Brussels

THE FUTURE of the campaign of national strikes and demonstrations by Belgian trade unionists against the planned austerity measures of the Government depends on a series of key meetings this week, after culminating in a mass rally in Brussels on Saturday.

Mr Wilfried Martens, the Prime Minister of the four-party coalition government, seems determined to press on with his BFr 200bn (£2.85bn) public spending cuts in spite of the furious reaction of the Socialist trade unions and other left-wing parties.

The strikes are set to continue today in response to a call for a further national protest by the SGTB, the Socialist trade union federation. The Christian unions are not expected to support them, however.

Stoppages mainly in the public sector and in schools have become more sporadic since the campaign was launched three weeks ago, with the main action now concentrated in Brussels, Liege, Mons and Charleroi where the Socialists unions are strongest.

The SGTB and Socialist Party leaders are to meet this afternoon to decide their next actions, while the Senate will vote on a motion of no confidence in the Government on Tuesday, following last week's rejection of such a move in the Chamber of Deputies.

Turkish party leader

The Social Democracy Populist Party (SDPP), Turkey's main opposition has elected Professor Erdel Inonu, a 62-year-old atomic physicist leader at its first convention, David Bouchard reports from Ankara.

Prof Inonu was formerly leader of a social democratic party excluded from the 1983 general elections. Six months ago it merged with a smaller centre-left party inside parliament. Recent opinion polls have given the SDPP a 40 per cent lead, suggesting that it could emerge as the ruling party after Turkey's next election in 1988.

Bolivia to get loan

Bolivia announced an agreement with the International Monetary Fund for a $57m standby loan which it hopes will unlock a further $300m in new credits from international organisations, Reuter reports from La Paz.

Ugandan curfew

The Ugandan Government clamped a night curfew on Kampala as government troops cracked down on illegally held arms in the capital, Reuter writes from Kampala. Radio Uganda said the curfew from 8.00 pm to 6.00 am would last until Tuesday. It gave no reasons for the move.

AT & T strike starts

Union members at American Telephone and Telegraph, the largest US telephone company, went on strike yesterday after negotiations on a new work contract broke down, Reuter writes from Washington.

Ecuadoreans vote

Ecuadoreans began voting yesterday in parliamentary elections that are the first electoral test of popularity for the conservative, pro-US Government of President Leon Febres Cordero, Reuter reports from Quito. There were no reports of violence as long queues of voters formed under sunny skies in the Andean capital.

Lebanon camp fighting

Heavy fighting raged yesterday between Shi'ite Amal militiamen and Palestinians defending three big refugee camps, breaking a midnight truce negotiated by Algerian and Iranian diplomats, Reuter writes from Beirut.

At least 33 people have been killed and hundreds wounded and displaced in 11 days of fighting, the worst bloodshed since hundreds died in a month of clashes at the camps on Beirut's southern outskirts last year.

Nigerian funds seized

Nigeria's military government has seized about $235m in cash and property allegedly plundered during the administration of former President Shehu Shagari, a judge said, AP reports from Lagos.

Swedish authorities withdraw threat to lock out teachers

BY KEVIN DONE, NORDIC CORRESPONDENT IN STOCKHOLM

SWEDISH public sector employers withdrew over the weekend their threat to lock out from today more than 35,000 teachers and 15,000 local authority employees in a first conciliatory gesture aimed at cooling the inflamed atmosphere in the Swedish labour market.

The Government has backed down in the face of threatened widespread labour conflict in both the public and private sectors.

Sweden still faces a turbulent week on the labour front, however, with continuing strikes in the health service and the threat of widespread industrial action in the private sector which could rapidly bring a large part of industrial production to a halt.

Withdrawal of the impending lockout against the teachers was the first tangible success of the mediation commission appointed a week ago to seek a comprehensive pay settlement for all of the country's 1.5m public sector workers.

The mediators appeared last night to have failed, however, with their plea to striking workers in the health service to return to work.

Nearly 9,000 doctors, dentists, social workers and other professional local authority employees have been on strike for a week-and-a-half causing wide disruption to the country's health services. Doctors are seeking pay rises of about 9 per cent but have still not receive a negotiable offer from the state.

In the private sector the chief threat is from the engineering sector, which accounts for nearly half of Swedish exports and 45 per cent of industrial production.

Metall, the engineering workers' union, has threatened to take out on strike 17,000 of its members at 19 of the country's biggest corporations from tomorrow in support of a pay claim. In response VF, the engineering employers federation, has threatened a drastic lock-out of 180,000 engineering workers with effect from midnight tomorrow.

Both sides have received promises of support from other parts of industry. Lo, the blue collar workers trade union confederation is threatening an overtime ban for 500,000 workers throughout industry to begin on June 6, while Saf, the employers federation is threatening to lock out up to 55,000 engineering workers in other sectors of industry from the same day.

A mediator has also been appointed by the state to seek a peaceful solution to this conflict, which has blown up as a result of conflicts over the interpretation of the framework national pay settlement made in the private sector in early April.

Poles protest against arrest of Solidarity leader

BY CHRISTOPHER BOBINSKI IN WARSAW

THOUSANDS OF Poles demonstrated in Krakow and Gdansk yesterday in protest at the arrest of the Solidarity underground leader, Mr Zbigniew Bujak.

Mr Bujak, 32, was the most senior figure in the banned union movement still at large and his arrest at the weekend represents a significant and unexpected blow against Solidarity.

Mr Lech Walesa, Solidarity's chairman, urged demonstrators to fill Mr Bujak's place and to carry on the struggle against "lawlessness" in Poland.

Mr Bujak, a worker from the Ursus tractor factory was elected the union's leader in the Warsaw region in 1981. At the outset of martial law he evaded internment.

Since then he has played a key role in the underground leadership (TKK) co-ordinating policy, printing activities and calling for action.

In spite of the underground's waning influence, he and his colleagues refused offers by the authorities of an amnesty in return for a cessation of their activities.

His arrest leaves the initiative squarely in the hands of the more pragmatic Mr Walesa.

● Mrs Margaret Thatcher, British Prime Minister, has written to the family of Mr Wladyslaw Frasyniuk, an imprisoned Solidarity leader, telling them that her government has repeatedly expressed its concern to the Polish government about his fate and that of the other 250 political prisoners in Poland.

Italy given command of US navigation station

BY JAMES BUXTON IN ROME

THE US Coastguard navigation station on the Italian island of Lampedusa has been placed under the command of the Italian Air Force. The change, which is to a large extent cosmetic, follows the Libyan missile attack on the base on the day of the US air raid on Tripoli. The change was confirmed at the weekend.

The base is a station in the world-wide US navigation network, LORAN (Long Range Aid to Navigation). It assists both civil and military navigation.

Colonel Muammar Gadaffi of Libya has insisted that the base was used to help US aircraft on their way to Tripoli. The two Libyan Scud missiles fired at Lampedusa missed their targets and exploded in the sea.

Since then, however, the Italian government has come under strong pressure from the people of the island, which is about 300 miles from the Libyan coast, to provide greater military protection and to reduce the US involvement.

Our Moscow correspondent adds: The first high-level talks between the Soviet Union and Libya since the US bombing raids ended in Moscow with Soviet agreement to give further military assistance to its maverick North African ally.

A Soviet military delegation will go to Libya in the first half of this month, according to a joint communique published at the end of a visit by Col Gadaffi's second-in-command, Abdel-Salam Jalloud.

It was not clear what form the new aid would take. Diplomats in Tripoli have said the Soviets were concerned by Libya's apparent inability to ward off the bombing raids in April or to strike down US fighter jets.

The Kremlin may therefore be unwilling to add any sophisticated new weapons to Libya's arsenal.

Western analysts say there are some 3,500 Soviet and East Bloc advisers in Libya.

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Bank of Israel chief urges structural changes in economy

BY ANDREW WHITLEY IN TEL AVIV

THE BANK of Israel yesterday called on the Government to reduce Israel's high personal income tax rate and open up the domestic capital markets to the private sector, so as to change the overall structure of the economy.

In a valedictory report, Mr Moshe Mandelbaum, the bank governor who is expected to announced his resignation today, said the process of economic recovery launched last July had only just begun. Further reductions in public spending and a strict adherence to agreed budget ceilings were necessary.

The appeal to the coalition government to strengthen the recovery programme by introduction structural changes was accompanied by figures showing that Israel's current account balance swung into surplus in 1985—for the first time in many years.

After deficits of $2.1bn (£1.42bn) in 1983 and $1.4bn in 1984, Israel last year recorded a $1.1bn surplus on its current account. Emergency economic assistance from the US played a large part in the turnaround, but an unusual, positive inflow *of private funds also helped.*

The Bank of Israel's annual report on the economy revealed that the *country's net foreign* debt declined by 2.5 per cent in 1985, to $19.2bn, after previous annual increases averaging 10 per cent. Per capita foreign debt—among the highest in the world—was down by 4.2 per cent, from $4,736 to $4,537.

Mr Mandelbaum, who is resigning in line with the recommendations of the Beijsky inquiry into the 1983 bank shares collapse, yesterday urged the Government not to weaken in its resolve over the current austerity programme.

The outgoing bank governor also recommended greater flexibility over the US dollar-Shekel exchange rate, virtually frozen since July.

In 1985, Israel had an unadjusted visible trade deficit of $3.97bn, down by 16.7 per cent compared with the previous year, the report said, thanks largely to an across-the-board cut in imports of all goods and services except diamonds.

Excluding defence imports—virtually entirely financed by US military aid—and trade with the occupied West Bank and Gaza Strip, the more meaning*ful, adjusted trade deficit fell* by nearly a third.

Tunisia struggles in capital markets

By Francis Ghilès

MOUNTING economic difficulties are beginning to affect the capacity of Tunisia to raise funds on the international capital markets.

A $100m (£68m) loan agreed last week and led by Banque Nationale de Paris, Union de Banques Arabes et Francaises and Bank of Tokyo, did not *attract the support the managers* had hoped for.

Three factors are making Tunisia an increasingly less attractive risk: the economic difficulties it is having to face in the wake of the sharp fall in the price of crude oil, exports of which account for about a third of the country's foreign income; the heightened tension in the region following the US raids on Libya last April; and the uncertainty surrounding Tunisia's domestic politics.

The recent $100m loan also had to be reduced from $175m.

The smaller tranche had been arranged by Lloyds Merchant Bank and Banque Arabe Internationale d'Investissement according to the terms of the 1982 double taxation treaty between the US and Tunisia. It was frozen because of the difficulty of obtaining from the UK Inland Revenue a ruling as to whether the Republic of Tunisia qualified under the treaty in its own name.

Syria suffers as hard currency dries up

BY TONY WALKER, RECENTLY IN DAMASCUS

SYRIA'S foreign exchange reserves have fallen to around $100m (£67m), according to a Syrian central banker. This is equivalent to only two weeks import cover.

The cash squeeze has forced the authorities into drastic measures to conserve scarce resources. Parents wishing to remit money to children studying overseas were recently prevented from purchasing dollars at the Syrian Commercial Bank because the funds, amounting to no more than a few million dollars, were needed for food and pharmaceutical imports for the Moslem fasting month of Ramadan now drawing to a close.

Syria's cash crisis has been caused by a squeeze on subsidies from Gulf states, a fall-off in remittances, and end to "free-of-charge" oil shipments from Iran, a disappointing export performance and crushing military expenditures.

Arrears on money owed to east and west bloc creditors total between $2bn and $3bn. Syria is seeking where possible to settle outstanding debts on barter terms.

Its military debt to the Soviet Union, incurred since 1973, may be as high as $15bn, according to some estimates. "I wouldn't give a snowball's chance in hell of that being paid," said a Western official in Damascus.

Syria is also heavily in debt to Iran which provided some 6m tonnes of oil annually between 1982 and 1985. A rescheduling agreement in 1984 is thought to have broken down. Money owed to Iran, which stopped shipping oil last year, could amount to several billion dollars.

Among Gulf states, only Saudi Arabia is honouring an agreement to provide financial assistance under the terms of Arab League Baghdad summit resolutions of 1978. It is providing between $600m and $700m a year.

Syria's trade deficit in 1985 (not taking into account the huge volume of goods smuggled into the country) is estimated at about $2bn. Its current account deficit was about $1bn.

Long delays are experienced by businessmen seeking to open letters of credit because of insufficient dollars in the banking system. The black market rates for the Syrian pound has depreciated to about half that of the official incentive rate.

In mid-January the Government cracked down on black market traders in an effort to restrain the rapid depreciation of the pound. This forced a short-term revaluation, but the Syrian currency is now depreciating again to levels approaching those available in mid-January when 18 pounds was worth one dollar.

The Government has also clamped down on smuggling of contraband goods across the border from Lebanon in an effort to conserve funds. Shortages of hard currency for raw materials have forced the closure of factories.

An indication of Syria's chronic hard currency shortage is that Trans World Airlines (TWA) has reportedly stopped honouring tickets written on Syrian Arab Airlines stock because of non-payment of money owed.

Business opportunities for foreign companies are diminishing. A Western commercial attaché said: "It is getting very difficult to have any enthusiasm for encouraging companies to compete for tenders, except those in the business of supplying foodstuffs."

The appointment last year of a US-trained economist, Dr Mohammed Imadi, as Minister of Economy was expected to foreshadow economic reforms. These have not materialised.

Dr Imadi, previously director of the Arab Fund for Economic and Social Development in Kuwait, has been telling associates he is frustrated *by the Government's apparent* unwillingness to embark on a reform programme. Tension is reported between Mr Imadi and Mr Abdul Qasm, prime minister, who is regarded as being against reform.

Assad loses magic touch, Page 5

Damascus in talks on re-opening Iraqi pipeline

BY KATHY EVANS IN DUBAI

IRAQ has despatched a delegation to Damascus, the Syrian capital, to discuss a re-opening of the Syria-Iraq oil pipeline, Western diplomats said in Baghdad at the weekend. The pipeline was closed in 1982 when Syria offered support to Iran in the Gulf war.

Arab observers and oil traders are sceptical that the quarrel between the two countries, ruled by rival wings of the Ba'ath Party, will be quickly resolved, in spite of recent efforts by King Hussein of Jordan to mediate.

Re-opening the pipeline would, however, be convenient for Iraq's Gulf backers, which are being called on to finance Baghdad's estimated $5bn military bill this year. Saudi Arabia, Kuwait and the United Arab Emirates all have budget deficits of their own and are suffering from the fall in oil prices. Saudi Arabia yesterday devalued its currency by 2.7 per cent to 3.75 rials against the dollar in a move linked to the price fall.

The Syria-Iraq pipeline has a capacity of 500,000 barrels per day, and any re-opening would severely depress prices. Iraq would have to undercut other producers to sell the extra crude. Its export capacity is already due to double by 1988 to 3.1m b/d with the planned expansions in the Saudi and Turkish pipelines.

Iraq has yet to stop its propaganda campaigns against Syria. Over the weekend, Baghdad Radio called for the overthrow of Hafez al Assaid, the Syrian President. It described him as "an intimate ally of the enemies of the Arab nation," who was working hand in hand with Israel to strike at the Lebanese and Palestinian people.

The prospect of a rapprochement with Syria clearly worries the Iranians, however. The Iranian newspaper, Resalat, warned that a mending of fences between Iraq and Syria was American-inspired and would harm Syria.

● The Gulf State of Oman announced that its oil prices for May had been increased by 95 cents o $11.85 (£8.06) a barrel.

Attorney General replaced after security probe row

BY OUR TEL AVIV CORRESPONDENT

THE ISRAELI Cabinet yesterday announced the replacement of Mr Yitzak Zamir, the Attorney General. Mr Zamir has been waging an almost single-handed battle to investigate the head of the shadowy General Security Service, better known as Shin Bet, in connection with the deaths in captivity of two Arab bus hijackers.

Mr Yitzhak Moda'i, the Justice Minister, who had, along with the rest of the inner cabinet, consistently opposed a potentially damaging police investigation of the Shin Bet chief, said yesterday the replacement of Mr Zamir by Mr Yosef Harish, a judge, had nothing to do with the affair.

The Attorney General, Israel's top legal officer, and traditionally a political independent, had submitted his resignation last February, after coming under increasing pressure, particulraly from the right-wing Likud.

Subsequently, he came into possession of what he says is highly incriminating evidence against the Shin Bet chief, Mr Avraham Shalom, of involvement in both the deaths of the two hijackers and a later cover-up.

The path has now probably been cleared for a compromise solution, whereby Mr Shalom will be investigated by a judicial commission of inquiry.

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INSIGHT INTO CORPORATE STRATEGY

YAMAICHI: A Long-Term Commitment To The City

In a history spanning almost 90 years, Yamaichi Securities has grown to become a global financial institution capable of meeting any of their international clients' needs. Mr. Hitoshi Tanaka, Resident Executive Director of Yamaichi Securities Co., Ltd. oversees the company's entire European operations, chief of which is Yamaichi International (Europe) Ltd.—a wholly owned subsidiary of Yamaichi Securities with firmly established roots in the City. It was there that he spoke with us recently about the significance of the recent developments and changes in the financial centres and Tokyo capital market.

By Glenn Davis

Based on a conversation with Mr. Hitoshi Tanaka
Resident Executive Director of Yamaichi Securities Co., Ltd.

24-Hour Trading

London, New York and Tokyo are the three centres for 24-hour trading, each separated by thousands of miles of sea or land, but interconnected by satellites. While London was the pioneer in building a system of international financing properly segregated from domestic business, New York and Tokyo are now busily transforming themselves into real international centres as well. London is facing the dilemma of preserving its character as the true international market centre, and of protecting the interests of British houses facing new international competition. Mr. Tanaka comments, "To varying degrees in each centre, conflicting social goals and jealously preserved safeguards for domestic economic interests may slow down the development of internationalisation, but there is no resisting the broad momentum of change."

London Leads

The London financial market, the centre of worldwide financing, has never let New York or Tokyo surpass its own status despite the occasional difficult times it has faced in the postwar period. It has a system and structure which work with a minimum of written rules or regulations, depending much more on time-honoured traditions and gentlemen's agreements.

The internationalisation of business in America and Japan has brought large international institutions like Yamaichi Securities to London to participate in the financial market here. "This has benefited the City of London by enhancing its status as an international centre and making possible the further enlargement of the volume of business done here."

"New York, despite its indisputable Number One position as the trading market for stocks and bonds, has failed to challenge London in the field of international new issue business because of its stringent formalities and legal requirements. Japan, which introduced the American system in its securities market in the late 1940s, has just begun serious efforts to transform Tokyo into an international centre to facilitate foreign investment by Japanese investors, as well as to provide overseas borrowers with a new issue market."

Although the lack of a large domestic economy in Britain has been an essential factor in the preservation of London as an international financial centre, it has also begun to expose the British houses' shortage of resources in comparison with those of the foreign competitors. How can such interests be protected without reducing the attractiveness of London as an international centre? Will the Big Bang be the answer?

Tokyo Market Opening Up To Foreign Houses

The Japanese market is being progressively opened to non-Japanese banks and financial organisations.

There are many areas in Tokyo where foreign banks and securities houses see new opportunities opening up before them. 21 houses have set up branch operations in Japan to carry out securities business. Six have been admitted to become Tokyo Stock Exchange members. Nine foreign banks have been allowed into the pension business.

"The Big Four securities houses in Japan are certainly not resisting foreign competition on their home ground. We welcome foreign participation in the Japanese domestic market, because it means a bigger pie, as well as bringing a new dimension into our business in Japan."

"Yet you must be aware," says Mr. Tanaka, "these changes are taking place very quickly. Smaller houses, as well as a variety of specialised or regional financial institutions, have not been able to keep up with the rapid changes." The recent increase in the number of Stock Exchange seats took place for the first time in 18 years. Similarly, the domestic pension fund business had long been limited to trust banks and life insurance companies, and of course there is Article 65 which continues to segregate securities from banking business.

"Some of the old rules and traditions are becoming out of date and should be changed or abolished," he says, "but considering the size and the complexity of the market, I think the recent pace of the transformation of the Japanese financial market deserves a fair appraisal by the foreign houses."

Growing Demand Of Japanese Investors

"The liberalisation of other sectors of the Tokyo market is visibly proceeding at an even faster pace. This is partly because of the efforts being made by the Japanese authorities, the securities and financial industries to lower the barriers, *but it also reflects the strong* and growing demand among Japanese investors to buy foreign securities."

Japanese investors last year tripled the volume of their foreign equity purchases, the net figure reaching almost $1 billion. An increasing number of foreign companies have listed their equity shares on the Tokyo Stock Exchange, bringing the total number of listed foreign companies to 22.

Twice as many foreign bonds were also purchased last year, reaching a figure of $50 billion. The total volume of trade in foreign bonds in Tokyo last year hit an unprecedented $500 billion. Japanese investors are taking full *advantage of their new freedom to buy into* international stocks.

"Japanese investors, incidentally, have their idiosyncrasies. Life insurance corporations, for example, want only high coupons; while individual investors are more interested in capital gains than current yield, for reasons of taxation. Once popular zero coupon bonds and deep discount bonds, as well as the more recently popular dual currency bonds, are all products of devices introduced in the Eurobond market to appeal to certain Japanese investors."

The Euroyen Market Surpasses The Samurai Market

The most outstanding outcome of the liberalization efforts initiated in Tokyo has been produced in the development of the Euroyen market centered in London. This market grew more than fivefold last year in volume, in terms of new bonds issued, and, in the first quarter of this year, showed a further 60% increase over the same period of last year. Of the total Eurobonds market, the proportion of yen bonds more than tripled to reach the respectable share of about 4% last year. This proportion is likely to double again this year.

Two *kinds of liberalization have con*tributed to this development: that of the guidelines by which issuers of these bonds are qualified, and that of undertaking swap transaction involving yen. Thanks to the deregulation of swap transactions, the qualifier for credit can use it, even if he does not actually need any yen.

In contrast to the phenomenal growth of the Euroyen market, there has been a relative downturn seen in Japan's Samurai bond market. The former has now overtaken the Samurai bond market in volume. "This mirrors what has already happened in New York, where dollar business has been lost to the Eurodollar *market for the same reasons.*"

This does not mean the end of the Samurai bond market, with its attraction of the bond being placeable with anyone. "Samurai bonds will undoubtedly regain their allure when foreign interest in yen paper begins to decline. Domestic investors in Japan will go on buying them. But Japan will have to make bigger efforts to make Samurai bonds more attractive."

Notwithstanding, the Samurai market offers the best means for Asian institutions and corporations, including those of Australia and New Zealand, to raise funds. "The geographical proximity and established business relations between Japan and those countries make it easier for Tokyo to provide the services required."

The Big Bang And Japan

The Big Bang in the City of London later this year is seen by Japanese financiers as a system consolidation which will not in itself be copied in Japan. The Japanese securities houses in London are, of course, affected. "Revolution within the city implies many aspects. I sincerely hope legislation does not go too far. No one is arguing, for example, against legislation designed for the protection of public investors' interests. If one fails to properly segregate the professional sector, which the international market certainly is, London's business as an international financial centre may begin to shift elsewhere."

"Having been established in London for more than twenty years, we feel we are a part of the hard core of the city, and not just a London branch of a Japanese organisation. We are benefiting from the City, but also, contributing to it. We intend to be here as a permanent organisation so long as London exists as the world's international financial centre."

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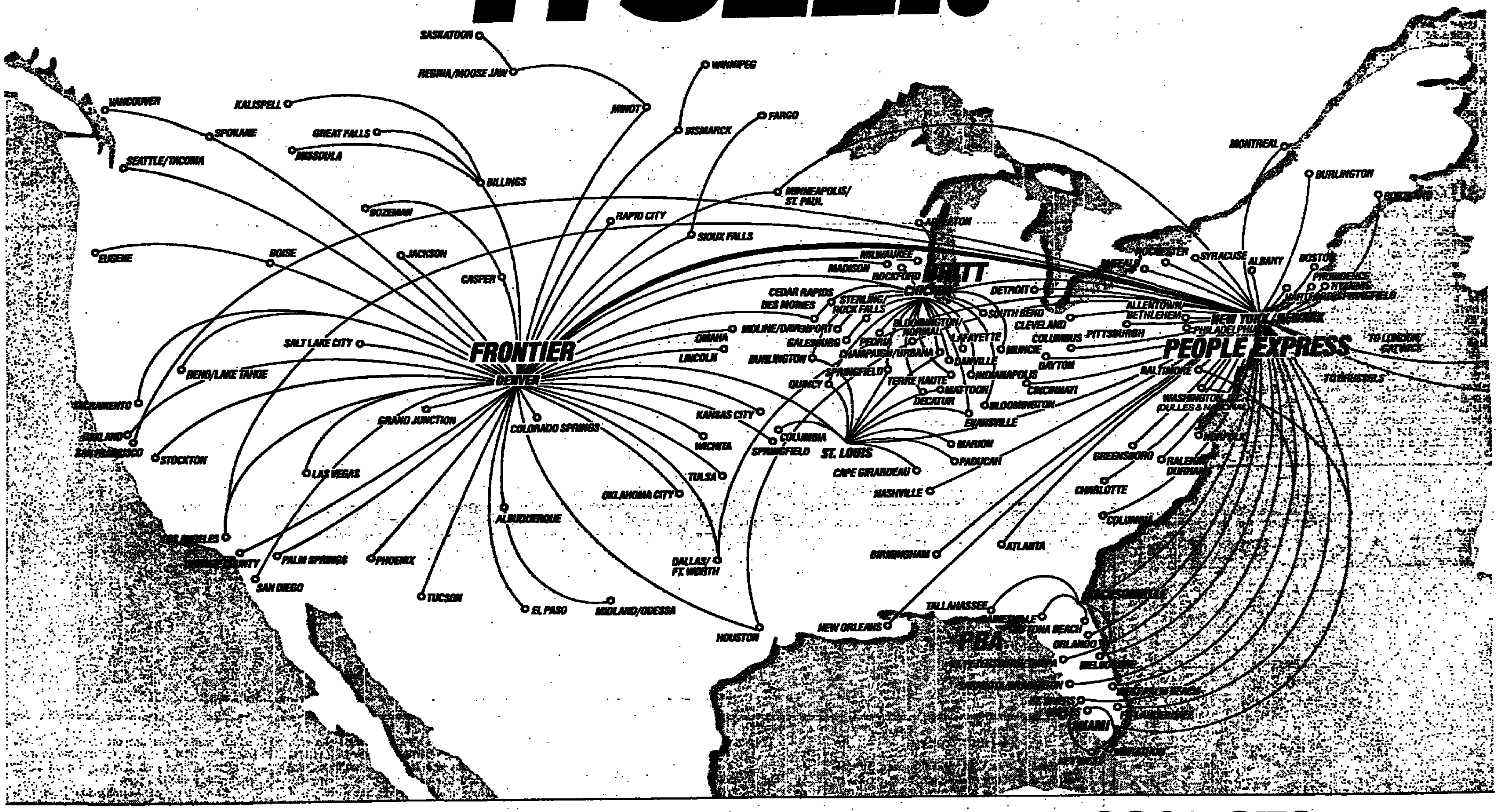

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A peek behind North Korea's veil of secrecy

THE NORTH KOREAN capital, Pyongyang, boasts a 44-storey international hotel these days where the country's rare western visitors are accommodated. Last March, when members of the first British touring group to penetrate North Korea's veil of secrecy arrived, it was almost empty.

Exploring the building they found darkened corridors and empty bars and restaurants. I was the only occupant of the heated swimming pool.

This same sense of inactivity pervades the capital. Many of the tyres on the fleet of ageing European cars which serve as the city's taxis were completely bald. The department stores had few paying customers.

It is apparent that North Korea's vaunted economic achievements under the "great leader" President Kim Il Sung are not borne out by reality.

More than two decades after the Korean war which divided

James Cotton finds Pyongyang dropping far behind in its race with Seoul for economic supremacy

the peninsula, turning it into a flashpoint of east-west rivalry, Pyongyang is falling further behind in the race for economic supremacy with South Korea.

Apparently unwilling to follow the more liberal Chinese path of modernisation, North Korea now runs the risk of excessive reliance on the Soviet Union unless it can break out of its self-imposed isolation.

This has been made all the more difficult by the fact that, since 1974, the "great leader" has been trying to hand over power to his son Kim Jong Il (the "dear leader") in the face of apparent resistance by party members, thus complicating attempts at greater flexibility.

Both South Korea, beset with its own economic problems and a rising tide of political dissent, and the United States, which has 40,000 troops stationed along the demilitarised zone, can only be grateful for this state of affairs in the north.

In 1984 visits by high level delegations from Pyongyang to China, and a subsequent agreement to engage in joint economic projects, led to speculation that North Korea was adopting the Chinese reform model.

This impression was reinforced by a move in September 1984 to allow joint ventures with foreign entrepreneurs. So far, however, there has been little to show for these initiatives. A French company was to have built an hotel on an island in the Taedong River, but according to sources in Pyongyang the advance engineering team left the capital in December after differences over the suitability of the site and have not returned.

The North Korean economic system, after impressive early achievements, is now beset with rigidities and bottlenecks. Although keeping abreast with South Korea is a national priority, the volume of South Korean trade is now more than 12 times that of the North, and Seoul's gross national product per head ($2,002 in 1985) is at least twice and possibly three times as great. South Korea's steel-making capacity is now three times that of the North (13.7m tons against 4.3m tons), and in light industry the gap is even wider (South Korea produces more than 40 times as many television sets, and more than 80 times as many refrigerators).

The report released on the completion of North Korea's last seven year plan (1978-84) was completely devoid of hard statistics. There was no plan whatsoever for the last two years. These are sure signs of considerable economic difficulties in a system where all economic activity is planned on a long term basis and where the state distributes most commodities.

In the early 1970s North Korea embarked on a brief but ill-considered spending spree in Europe and Japan buying machinery and equipment (including whole plants for the manufacture of machine tools and paper) and commodities. With a decline in the world prices of the raw materials which are North Korea's staple exports, and the failure of this new equipment to create additional wealth, substantial debts of $2bn were incurred.

This led to a series of debt reschedulings, the first of which was in 1974. Until these debts are handled in an orderly way North Korea cannot expect to acquire greater access to the world market.

This is a point which is not properly understood in Pyongyang, despite the fact that international exporters are frequently unable to take out insurance for exports to North Korea. According to diplomats, following repeated requests from Sweden promises were made last year that a start would be made in six months to repay Sweden's £80m debts. But no repayments have begun, and North Korea can only acquire spare parts for its ageing Volvo cars on difficult cash terms.

Some business is done with Europe however. Siemens has recently equipped the new Mansudai Assembly Hall (where the North Korean parliament meets) with a complex system of microphones as well as other electronics, and aluminium window fittings for the new Koryo hotel have come from Austria. A British company has helped modernise dock equipment, and North Korean international cargoes are insured in the City of London.

Isolation from the world market has not prevented North Korea from drawing up optimistic plans for a large increase in tourism, despite its unwillingness for political reasons to accept parties from the United States or Japan.

North Korea's present tourist capacity is being tripled to 30,000 beds by 1988, and will then be raised by a further 80,000 beds. Ostensibly this expansion is in the expectation that Pyongyang will cohost the next Olympic Games in 1988.

In fact it seems to be based on the irrational grounds that Pyongyang would then have more hotel rooms than Seoul, even though its present capacity is largely unused.

Pyongyang oscillates between condemning Seoul as an unsuitable site for the Olympics, presently because of an alleged epidemic there of Aids, and insisting that they be held in both capitals simultaneously.

There are, however, other signs that western tourism is being more seriously contemplated as a new source of hard currency. But many more flights into the country will be needed for this to be possible. The present twice-weekly Aeroflot flights from Moscow are fully booked many months in advance.

In the long run, for Pyongyang to enter the world market and become part of the dynamic east Asian economy, the status quo on the Korean peninsula would have to be accepted. But this would fly in the face of incessant claims by the Communist leadership that South Korea is an impoverished American colony, and that successful development is only possible through the philosophy of "Juche" or self-reliance, the regime's cornerstone.

The unification of Korea has been the elder Kim's life project, and acceptance of a separate regime in Seoul would

KIM IL SUNG: claims not borne out by reality

undermine, possibly fatally, the ideological foundations of the dynasty.

The regime goes to extraordinary pains to insulate its citizens from external sources of information.

Only radios with dials fixed to North Korean frequencies are available, and the only British newspaper available in the Grand People's Study House is the Morning Star. No expense is spared in building the image of the younger Kim as a genius in the fields of art, film, and ideology, despite his complete lack of originality.

In recent times Pyongyang has turned to the Soviet Union for modern inputs, including armaments, which cannot otherwise be acquired. The Soviet Union has always been North Korea's major trading partner, but a series of economic contacts, including Soviet construction of plants in Korea in exchange for a proportion of the production, have enhanced that role.

This new relationship has not prevented the Russians from blunt speaking about their economic ties with Korea. Pyongyang has been criticised for shortcomings and delays in delivering commodities. And the considerable extent of Soviet technical aid to Korea has been well publicised even though this undermines Korean claims to self-reliance.

But the closer economic relationship with the Soviet Union has undoubtedly been chosen because this will not generate the ferment of new attitudes and demands which are threatening to undermine the formerly entrenched communist political elite in China.

The author is lecturer in politics at Newcastle University.

Tony Walker on the troubles piling up for Syria's president

Assad loses his magic touch

THESE ARE troubled times for Syria's President Hafez Al-Assad, a man sometimes credited with almost mythical powers of control over events. As Israel and Syria eye each other nervously across their border, criticism is being voiced about Mr Assad at home and abroad.

The collapse in January of a Syrian-inspired peace accord in Lebanon highlighted the limits of Mr Assad's persuasiveness. At home, the Syrian economy is in crisis, caused in part by Syria's huge military build-up.

A recent rash of terrorist bombings has raised questions about the effectiveness of Syria's security apparatus, one of the most pervasive in the Arab world. At the same time, Syria is under pressure from the west over its alleged sponsorship of state terrorism.

Syria's alignment with non-Arab Iran in the Gulf War is straining its relations with its Arab neighbours and threatening to isolate it further in the Arab world. Iran's occupation in February of Iraq's Faw peninsula at the head of the Gulf, bordering Kuwait, alarmed conservative Gulf states, notably Saudi Arabia, whose financial backing for Syria is about all that stands between Damascus and bankruptcy in terms of its foreign exchange requirements.

While Syria is facing more and more problems that may, over time, erode the position of the ruling faction, nowhere is it seriously suggested that Mr Assad himself is in difficulties, or that his 16-year hold on power is shaky. However, doubts persist about his health following a serious heart attack in November 1983.

The prospect of war between Syria and Israel has receded for the time being, but tensions persist. Recent bellicose speeches by the Syrian leader fuelled talks of renewed conflict with Israel, not that Mr Assad said anything new.

For Syria itself, its main worry, apart from its dilapidated economy, is the enemy within. On *March 13*, a refrigerator truck exploded in Damascus, injuring several civilians. That was followed on April 16 by a wave of bombings in north-west Syria.

Responsibility was claimed by an unknown group calling itself the "Movement of 17 Tishrin" Arabic for the months of October and November. The group said it aimed to liberate *Syria from "the Alawite regime."*

Mr Assad is from the Alawite tribe which comprises about one tenth of Syria's 10m population. Like the Druze in Lebanon, the Alawites are an obscure quasi-Islamic sect motivated by fierce tribal loyalties and a determination not to be subjugated by a Moslem majority.

Any challenge to Alawite supremacy in Syria, exercised through its control of the ruling Baath socialist party, is likely to be met with maximum force—as was demonstrated by the siege of Hama in 1982 when perhaps as many as 10,000 out of the city's 200,000 population died.

The bloody siege of Hama, Syria's fifth largest town, followed increasing agitation by the Moslem brotherhood, religious fundamentalists opposed to the Baath party's secular and socialist policies. Hama was their stronghold.

Those behind the renewed agitation have not been convincingly identified. Syria has alleged Iraqi involvement, but without offering firm evidence.

Mr Assad's ruthless pursuit of Syrian primacy in Arab counsels, his intervention in the Palestine Liberation Organisation's internal affairs, his backing for Iran in the Gulf War and his attempts to manipulate events in Lebanon have reaped a bitter harvest.

Prominent among those who might wish harm to Syria are Lebanon's Maronite Christians who believe they have recently been subjected to a wave of Syrian-inspired bombings in Christian East Beirut.

Throughout his long rule, Mr Assad has demonstrated a capacity to recover from setbacks such as those his country suffered at the hands of the Israelis. In 1982, his airforce was decimated, but with Russian help it has been rebuilt.

Cornerstone of Syria's defensive shield is Soviet-supplied SA-5 missiles which have a range well beyond Syrian airspace, but have yet to be tested against the Israeli airforce. The Syrians cannot have drawn much comfort from the performance of Libyan SA-5's during the US air strikes against Tripoli and Benghazi. At best the Libyans scored one effective hit against the attackers, bringing down an F-111 fighter-bomber.

American technology, which allowed US pilots to jam Libya's electronically - operated air defence system is almost certainly available to the Israelis.

Syria's economic crisis is such that Mr Assad cannot ignore its consequences. Defence spending in 1985 accounted for 58 per cent of the current operations budget, or more than 30 per cent of total budgetary outlays at a time when Syria's available sources of funds were badly depleted. The oil price collapse is disastrous for Syria since it means there is little prospect of extra help from Gulf states.

At the Arab League Baghdad summit in 1978, Syria, as the principal "confrontation" state in the struggle with Israel, was promised $1.85bn a year from countries like Saudi Arabia and Kuwait. Only the Saudis are paying their share, which amounts to between $600m and $700m a year.

Syria is beset by shortages of imported goods, including spare parts and raw materials. Some factories have closed because of lack of feedstock and few, if any, industrial enterprises are operating at more than 50 per cent capacity.

Corruption is said to be rife and to involve senior figures in the administration. Growth has fallen and inflation and unemployment are increasing. Price rises in the past year for foodstuffs and pharmaceuticals range up to 400 per cent.

Grumbling is widespread in the towns and in business fraternity, which is suffering most from price increases, foreign exchange shortages and the generally negative commercial atmosphere.

It is these factors that are contributing to unhappiness with Baath party rule that has brought relative stability to the country after the turbulent and coup-wracked years between the end of the French mandate in 1946 and 1963 when the Baathists took over.

For Mr Assad the worry may well be that some of his country's problems are intractable, such as the economic malaise and the stalemate in Lebanon, without recourse to radical and risky measures.

Syria under pressure could prove less predictable than is comfortable for its co-tenant of the Golan Heights and for the West.

RAIDS AIMED AT 'ECONOMIC' TARGETS

Tamil group admits bomb campaign

BY JOHN ELLIOTT IN MADRAS

A TAMIL extremist group which has planted three bombs in Sri Lanka killing more than 55 people in the past three days, yesterday admitted responsibility for the first time for blowing up an Air Lanka airliner in Colombo a month ago and claimed it could "hit wherever and whenever we want to."

The group, the Eelam Revolutionary Organisation (Eros), has brought a new dimension to Sri Lanka's Tamil ethnic unrest recently with a series of bomb attacks on economic and other targets in the capital of Colombo as well as in Tamil areas such as the eastern port of Trincomalee.

This contrasts with the activities of most other Tamil groups which tend to concentrate on attacks like that yesterday on an army supply route in the northern peninsular of Jaffna. These other groups have reservations about the civilian deaths involved in Eros bomb raids.

"We have stepped up our attacks for political reasons and our primary target is economic sabotage to bring pressure on the Government, and to hit back at the military which are shelling our areas in Jaffna," Mr N. Shankar, a member of the Eros three-man executive revolutionary committee, based in the southern Indian city of Madras, said yesterday. The bombings "would not stop yet," he added.

The aim was not to stop peace talks on the Tamils' ethnic claims but to "expose" the fact that President Junius Jayawardene was "bluffing everyone by talking of a peace deal when he wants a military solution."

"*We do not go out to kill* civilians and we try to have minimum casualties," said Mr Shankar, explaining that the Air Lanka deaths were "accidental and very unfortunate." The bomb should have "gone off earlier when no passengers were nearby."

The airliner attack was "economic" because it was aimed at driving tourists away from the islands.

Eros was responsible for the deaths of 12 security forces at the weekend when it planted a bomb on a train from the eastern city of Batticaloa. On Friday it bombed a Colombo food processing plant of Ceylon Cold Storage, killing ten civilians, and blew up a landmine near Trincomalee, killing 35 members of security forces.

Mr Shankar, and Mr V. Balakumar, another member of the executive committee, said their aim was also partly to drive multinational companies including a Singapore-owned Trincomalee Flour Factory out of Tamil areas and to persuade companies such as "Tate and Lyle, United Foods and a French minerals company" to abandon plans to open in the north or east of the island. "We don't wont foreigners interfering in our homeland until we can decide whether they come," said Mr Balakumar.

India is exploring the possibility of a peace initiative and President Jayawardene sent a message to Mr Rajiv Ghandi, the Indian Prime Minister, at the weekend, indicating his interest.

Tougher South African law held up

BY ANTHONY ROBINSON IN JOHANNESBURG

THE South African Government's plan to get tough new security laws on to the statute book before June 16, the tenth anniversary of the 1976 Soweto uprising, has fallen foul of the complexity of the tri-cameral, racially-separate constitution introduced in September 1984.

Last month the Government introduced amendments to the already Draconian security laws on the same day that it announced the abolition of influx control and the hated pass laws which regulated the movement of blacks.

The aim was to empower the Minister of Law and Order to declare selected areas of the country as emergency areas without the need for the Government to resort to the kind of sweeping emergency powers it introduced for eight months last July which attracted international condemnation.

Under the amendments the minister, Mr Louis le Grange, a Cabinet hardliner, would *have been able to arrest people* without trial for up to 180 days in selected areas deemed by him to present a security risk without giving access to lawyers or family.

This plan has, however, run into stiff opposition from the Indian House of Delegates and the Coloured House of Representatives several of whose members have in the past been imprisoned under South Africa's much criticised security laws, which allow detention without trial.

Under the 1984 constitution, bills have to be approved by all three houses after a lengthy process of negotiation in special committees, designed to work out acceptable compromises. Failing consensus, bills are passed to the President's Council, the top level advisory and mediation body, which has a built-in white majority on the ruling National Party. The final word is vested in President P. W. Botha.

Given the degree of opposition which the new constitution provoked in the Coloured and Indian communities and by blacks, who are at present totally excluded from parliament, the Government is now being forced to modify its original proposals.

This is mainly to preserve a degree of credibility for those Indian and Coloured politicians who have put their political reputations on the line by agreeing to participate in the new partliamentary set-up in the face of widespread opposition from within their respective communities.

● The Mozambican National *Resistance (MNR)*, the Mozambican rebel group financed and supported largely by former Portuguese colonialists and openly backed by South Africa until the March, 1984, Nkomati accords, has announced its decision to open an information office in Durban.

The move, which closely follows the opening of a similar office in New York, faces the South African Government with an embarrassing dilemma. The Government has consistently denied further support for the MNR since Nkomati, despite *Mozambican Government accus*ations of continuing clandestine South African aid to the rebels.

Moi defends crackdown on Kenyan dissidents

By Mary Anne Fitzgerald in Nairobi

PRESIDENT Daniel arap Moi of Kenya yesterday defended his Government's crackdown on political dissidents in which 19 people *have been jailed since* March and a further 24 are being held without charge.

Speaking at celebrations marking the 23rd anniversary of the granting of internal self-rule by the British, President Moi condemned "social and political misfits" who "have allowed themselves to be deceived by their foreign masters to promulgate ill-conceived ideologies." He was referring to Mwakenya, a Marxist underground movement seeking to overthrow the Government.

Mwakenya, a Swahili acronym for the Union of Nationalists to Liberate Kenya, has distributed pamphlets accusing the Government of corruption, economic mismanagement and forced family planning and criticising *military links with the US.*

In the toughest move against opposition since junior air force officers attempted to overthrow Mr Moi's staunchly capitalist government four years ago, heavy sentences have been handed out to those found in possession of Mwakenya literature.

Over half those held are Kikuyu, who have lost the dominance they enjoyed under the late President Jomo Kenyatta and increasingly resent and political and economic influence of Mr Moi's own Kalenjin ethnic grouping.

Diplomats do not, however, see Mwakenya as posing an immediate threat to the Government. The economy has been boosed by high prices for coffee, the main export, and the movement is thought to have little support *in the right-wing* armed forces, whose leadership was reshuffled last February.

Gatt talks likely to cover trade in farm products

BY STEVEN B. BUTLER IN SEOUL

SUBSTANTIAL PROGRESS towards the launching of a new round of negotiations under the General Agreement on Tariffs and Trade (Gatt) was made at an informal meeting of senior trade officials in Seoul, according *to Mr Kum Jin-Ho, the* South Korean Trade Minister.

Mr Kum, who chaired the weekend talks, said yesterday that the participants, mainly trade ministers, had made progress towards common views on critical "road block" issues, apparently including the discussion of trade in agricultural products and services in any new Gatt round.

"There was a widely-held view that trade in agricultural products should be an integral part of the agenda of the new round," Mr Kum said.

France, which has opposed the inclusion of trade in agriculture, appears to have conceded this key point. Mr Michel Noir, French Minister for Foreign Trade, is reported to have said that France would agree to discussions on agricultural trade as long as it is not given priority.

The meeting appears to have moved *towards a concensus that* these controversial issues might be included in the agenda as long as the so-called "old issues" receive priority.

"There emerged a widely-shared opinion that trade in *services could be considered* along with the old issues in the agenda for the new round," Mr Kum said.

The ministers also called for a "standstill commitment" that nations participating in the new round do not introduce new trade restricting *measures*, and that they exercise the political will to roll back existing measures that violate Gatt rules.

The *failure of India* and Brazil to send participants (Brazil sent only an observer), however, means that the consensus of the meeting does not include the two developing nations that have led the fight to exclude services from the new round.

● South Korea has announced a package of measures to lift import restrictions on 301 items on July 1.

The items, currently banned from import, include colour TV *sets, microwave ranges, buses*, trucks, alkaline batteries, diesel engines, speakers and amplifiers, and turkeys.

The new measures continue a gradual programme of import liberalisation begun early in the decade. The *programme* has *been criticised* abroad, however, because prohibitively high tariffs are frequently imposed on newly liberalised items.

US, Israel discuss stronger navy

BY ANDREW WHITLEY IN TEL AVIV

ISRAEL AND the US are in the final stages of negotiations on a major re-equipment programme for the Israeli navy, estimated to cost nearly $1bn, over the next decade.

A Pentagon team, headed by Mr Dov Zakheim, Deputy Under-secretary of Defence, held talks over the weekend in Tel Aviv with Israeli Defence Ministry officials on the proposed co-production of three diesel-powered submarines and four corvette-class missile boats.

The discussions are also believed to have covered a pro*posed refurbishment and up*grading of the state-owned Israel Shipyards in Haifa, requiring the investment of a further $300m.

Apart from enabling Israel *to construct some of the new* submarines—and possibly the missile boats as well—in Haifa, the upgrading of the dockyards is intended to allow the U.S. Sixth Fleet to have an alternative in the region of the Greek port of Piraeus for drydock and repair work.

Talks with the US on the Israeli navy's wish to expand the range of its operations well out into the Mediterranean, and meet the perceived danger from an increase in the power of the Syrian navy, have been *going on for over a year*.

Many senior officers believe that the US military assistance programme—$1.8bn in the current fiscal year—cannot stretch to cover both the Lavi advance *fighter project and the* Navy's proposed new ships.

A further problem is the refusal by Mr John Lehman, the US Navy Secretary, to permit American shipyards to bid for work on the Israeli submarines, on the grounds that this would *divert resources away from* the US's own nuclear-powered submarine construction programme.

The likely solution is that part of the three submarines will be built at Israel Shipyards and part in a third country. West Germany is mentioned by Western diplomats as a likely candidate for the more sophisticated construction work.

Top grain exporters meet today

By Bernard Simon in Toronto

AGRICULTURE AND trade ministers from the world's five leading grain exporters meet at a ski resort north of Vancouver today to discuss increasingly disruptive competition in the international grain trade.

The chances of an immediate truce in the "wheat war" appear slim, however. A spokesperson for the meeting's host, Mr Charles Mayer, Canadian Wheat Board Minister, said that "you have to be realistic about what can be accomplished in one day."

Others at the meeting will include Mr Richard Lyng, US Agriculture Secretary, Mr Frans Andriessen, EEC Agriculture Commissioner, and trade and agriculture ministers from Australia and Argentina. The five ministers will hold a press conference this evening.

Their discussions are expected to centre on aggressive marketing tactics by heavily subsidised US and EEC grain producers which have depressed export prices and led to unaccustomed rivalry in many markets.

The tensions have been illustrated in the past fortnight by a US announcement extending export enhancement subsidies to shipments of barley to Saudi Arabia, which has emerged in recent years as the world's biggest barley customer.

The EEC has responded by releasing 440,000 tons of barley from government intervention stocks, about three quarters of which is earmarked for Saudi Arabia.

These actions have pushed barley prices down by about $10 a ton and angered Canadian producers who have built up a valuable market over the last five years in Saudi Arabia—estimated at 1m tons this year or one-sixth of the country's total imports.

Ariane loss raises doubts about French TV plans

BY PAUL BETTS IN PARIS

THE LOSS of the latest European Ariane rocket at the weekend increases doubts over the launch of France's first *direct broadcasting satellite* TDF-1. Even before the accident the much postponed launch had been put back again to January or February next year from the previous scheduled launch of date of November.

The Government has decided to revise the financing of the ambitious FFr2.7bn (£247m) programme and also wants to cancel the concessions granted by the previous Socialist administration to operate channels on the satellite, offering *them to new operators on* different financial terms.

The Socialists had granted concessions to operate two channels on the satellite, which will cover virtually all Western Europe, to a European consortium, including Mr Robert *Maxwell*, Mr Jerome Seydoux, Mr Silvio Berlusconi and the West German Kirsch film production group just before the French legislative elections last March.

The latest delay in the launch also follows technical problems on *the travelling wave satellite* tubes which are a crucial component of the direct broadcasting satellite system. However, the technical problems appear to have been overcome and the satellite will be ready from a technical standpoint for its *launch now scheduled* early next year.

The future of the French satellite and the concessions to operate channels will be linked to the Government's controversial broadcasting and television privatisation plans due to be finalised soon. The plan includes the privatisation of *France's oldest and largest* state television network TF-1.

In the case of the direct broadcasting satellite, the Government is understood to feel that the previous administration had offered excessively low financial terms to operators. *Rental costs for each channel* had been set at FFr 55m annually for the first few years rising gradually by the 12th year to FFr 127m.

Meanwhile, another row is simmering in the communication satellite business involving *the supply of travelling wave* satellite tubes for the European satellite telecommunications organisation Eutelsat programme involving three communications satellites to be launched at the end of the decade. A European consortium *led by Aerospatiale, the French* state-owned aerospace group, recently won a $200m order to build the three satellites. But the French nationalised Thomson electronics and defence concern is now in fierce competition with the US Hughes Aircraft *group to secure the order for* the supply of satellite tubes for the Eutelsat programme.

"There are no technical, economic or practical reasons why Hughes should be favoured over Thomson. It would be a political decision difficult to justify if the choice went to Hughes and we would not hesitate to raise a major fuss," said Mr Jacques Caumartin, head of Thomson's tube manufacturing division.

Second Atlantic optical fibre link planned

By James Buxton in Rome

Telecommunications utilities from Europe and North America have decided to build a second optical fibre cable network across the north Atlantic — two years before the completion of the first network, scheduled for 1988.

The new network, to be called Tat 9, will be linked directly to the Mediterranean optical fibre network now under development, whose hub will be at Palermo in Sicily. It will cost about $650m, and come into force in 1991.

Agreement to build Tat 9 was reached in Paris a few days ago. With its Mediterranean link it marks a major expansion of optical fibre telecommunications networks. Participants in the venture include British Telecom, AT and T of the US and Italcable, the Italian intercontinental telecommunications company.

SHIPPING REPORT

Tanker rates settle down

BY ANDREW FISHER, SHIPPING CORRESPONDENT

TANKER RATES settled down last week, abating fears that the market could overheat as a result of the recent increased demand stimulated by lower oil prices.

Demand for VLCCs and ULCCs (very large and ultra large crude carriers) from the Gulf was sufficient to keep rates at the previous week's levels, with more owners now ready to take vessels from lay-up berths and return them to trading.

Brokers expressed concern, however, that if too many ships went back onto the market, rates could fall. For VLCCs (200,000 - 300,000 deadweight tons), the rate from the Gulf to the UK and the Continent was around Worldscale 35, the same as in preceding weeks, but more than 10 points higher than a year ago.

Owners *of dry* cargo tonnage, lamented Denholm Coates, the UK shipbroker, "can only look enviously at their tanker compatriots." For all dry cargo markets — the main ones are iron ore, coal and grain — the situation remained "dull and extremely difficult."

World Economic Indicators

UNEMPLOYMENT

		Apr. 86	Mar. 86	Feb. 86	Apr. 85
US	000's	8,342.0	8,419.0	8,527.0	8,384.0
	%	7.1	7.2	7.3	7.3
UK	000's	3,325.0	3,324.0	3,337.0	3,273.0
	%	13.7	13.7	13.8	13.5
W. Germany	000's	2,230.1	2,447.6	2,593.0	2,304.6
	%	8.3	9.1	9.6	8.6
Belgium	000's	490.6	504.7	521.2	546.2
	%	11.9	12.2	12.6	13.2
France	000's	2,371.6	2,394.9	2,434.0	2,338.3
	%	10.2	10.3	10.5	10.1
Italy	000's	3,197.3	3,207.4	3,238.5	2,932.6
	%	14.0	14.1	14.2	12.9
Netherlands	000's	697.9	725.0	750.0	748.1
	%	12.3	12.7	13.2	13.1
		Mar. 86	Feb. 86	Jan. 86	Mar. 85
Japan	000's	1,640.0	1,640.0	1,650.0	1,740.0
	%	2.55	2.55	2.66	2.70

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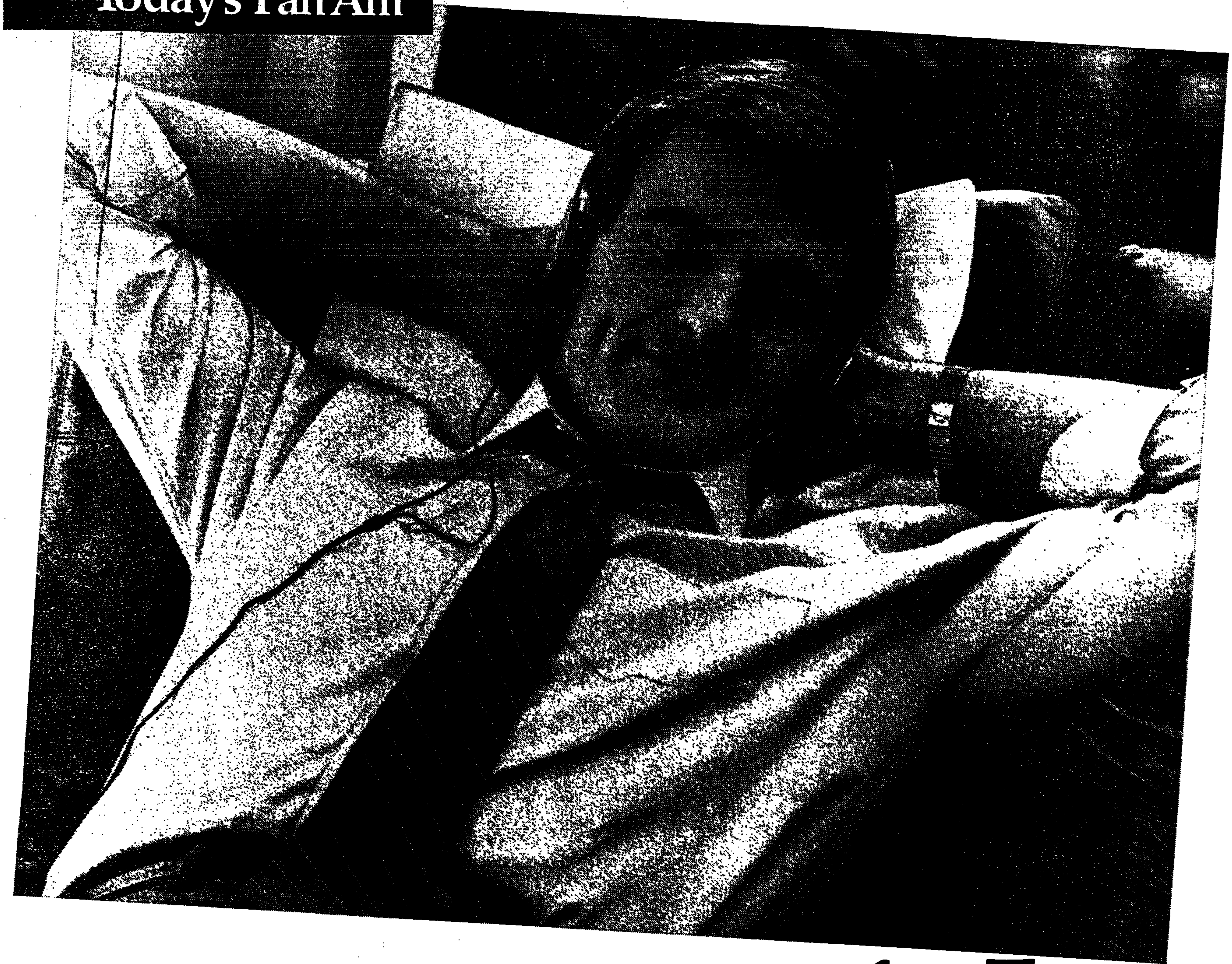

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UK NEWS

Shah denies cash crisis or board rift at Today

BY ANDREW FISHER

MR EDDIE SHAH, publisher of Today, the colour tabloid launched in March, said yesterday that he had no plans to leave the newspaper. He denied reports of a boardroom rift.

Two leading corporate investors in the £20m venture have pledged continuing support for Today, which has failed to meet initial readership targets and is planning *a circulation and promotion drive.*

Mr Shah is to make a speech today to the annual conference of the National Federation of Retail Newsagents in Eastbourne. It is expected to include a statement about the future policy of Today.

From Sydney, Australia, Mr Greg Gardiner, group general manager of the John Fairfax publishing group, denied weekend reports that it was interested in buying all or part of the Today publishing company, News (UK).

He said Fairfax did not comment on speculation. A Fairfax director was in London for a Reuters board meeting, but not to look at Today. Recently, the group bought the Spectator, the British weekly magazine.

Mr Shah said there had been no talks with anyone over a possible takeover of News (UK). Nor was there a cash crisis. The company had asked investors for £2.5m to meet cash flow difficulties, although those had been eased by last weeks's payment of about £1m in delayed advertising revenues.

Directors of British and Commonwealth Shipping and the Ivory and Sime investment trust said they supported Mr Shah fully. Both have £2m invested in News (UK), as does Trusthouse Forte, whose directors were not available

No comment was available from Portsmouth and Sunderland Newspapers, with about £500,000 invested, on reports that it was against further finance.

Mr Alex Hammond-Chambers, chairman of Ivory and Sime, said: "If extra money is required, we will certainly give it."

News (UK) said management changes would occur shortly. At the weekend, Mr Jonathan Holborow, editor of the Monday to Saturday paper, resigned to return to the Daily Mail and was succeeded by Mr Denis Hackett, an editorial consultant.

Helen Hague writes: Ms Brenda Dean, general secretary of the print union Sogat '82, has written again to members dismissed by News International, urging them to use their vote in the secret postal ballot now under way on the company's "final offer".

Fear of national postal dispute

A POSTAL dispute that started in the North of England last week over new work schedules might spread throughout Britain, according to the Union of Communications Workers (UCW), the main postal union, and the Post Office, David Thomas writes.

The UCW has organised a ballot on industrial action at many postal sorting offices. Already, some 9m letters are being held up in the North of England. Workers at some sorting offices have been suspended for refusing to handle traffic diverted from Leeds, Yorkshire, where the dispute began.

Mr Bill Coburn, the Post Office's managing director for letters, said the new schedules, being pioneered at Leeds, would mean a better flow of work through the offices, with improved matching of workers to the peaks and troughs of demand.

The Post Office introduced the schedules last month without union agreement and plans to do so soon at 11 other offices where UCW ballots are being held this week. Eventually, the Post Office hopes the schedules will yield 15 per cent in productivity savings once they have spread throughout the country.

At Leeds, the schedules will mean the loss of about 40 out of 850 full-time jobs. They will also lead to cuts in overtime for those doing large amounts of overtime.

☐ BRITISH AEROSPACE, the UK's biggest aircraft, missile and spacecraft manufacturer, plans to develop a multi-million-pound residential flying training college at Prestwick Airport in Scotland over the next few months.

One of the first contracts it will be bidding for comes from British Airways, which is seeking tenders to train up to 50 prospective airline pilots a year for the next 10 years.

☐ FRAUD SQUAD has named four more operators said to be sending suspect bills to companies in Britain for entries in unofficial directories.

Their names, published by the Confederation of British Industry, are: The World Telex Edition; The International Telex Directory of Hamburg; Telefax Publisher Arnold and Schade of West Berlin; and the World Telex Directory in Texas.

☐ THAMES TELEVISION, the London independent channel that plans to go public this month, is to offer a 200 minimum share allocation in an effort to persuade its viewers to become shareholders. Thames said it also wanted some institutional interest.

☐ LABOUR PARTY leaders are to be pressed by the General Municipal and Boilermakers Union to introduce legislation under a future Labour Government sharply increasing statutory employment protection, as part of a GMBU campaign seeking greater rights for individual workers.

Goals set by British Airways

By Lynton McLain

BRITISH AIRWAYS (BA) wants to be the "best, safest and most successful" company in travel, tourism and transport. It aims to generate £500m cash each year and counter scepticism in the City of London about its financial efficiency.

The goals are set by the airline in its latest corporate statement of missions and goals to 1990 and beyond. The statement redefines and replaces the BA corporate statement agreed a year ago and recognises that BA has to be run "on essentially commercial grounds."

Mr Colin Marshall, the airline's chief executive, presented the final statement of corporate objectives to senior BA executives last week after almost 1,000 managers had submitted ideas.

"This statement establishes our priorities and gives us guidelines on how we should run the company, how we should perform in relation to our competitors and what we should be to our own people, to our customers and owners, whoever they may be," he said in the latest issue of the airline's house newspaper.

One of the BA's targets is to earn "good profits" and to "satisfy shareholders," he said. Institutional investors "were not as convinced of our corporate competence as we could have wished in the light of the airline's financial turnaround," Mr Jim Harris, the director of marketing, said in the same issue. "Basic image problems and general scepticism about BA's real business and financial efficiency linger," he said.

Branson agrees to head clean-up campaign

BY MICHAEL CASSELL, POLITICAL CORRESPONDENT

MR RICHARD BRANSON, the airline operator and pop-music impresario, has agreed to head a campaign to clean up Britain and provide jobs for thousands of unemployed young people.

The initiative, involving the Government, the private sector and voluntary organisations, was first suggested by Mr Kenneth Baker, the new Education Secretary, when he was at the Department of the Environment.

The plan has gained added momentum in the wake of recent comments by Mrs Margaret Thatcher, Prime Minister, who, on her recent return from Israel, criticised "litter-strewn" Britain. Mr Nicholas Ridley, the new Environment Secretary, has also given the proposal his full backing.

The New Environmental Work Scheme is expected to get under way in a few weeks' time when Mr Branson, the 36-year-old head of Virgin Records and Virgin Atlantic, returns from his latest bid to break the Transatlantic speed record in Virgin Challenger 11, his specially built boat. A formal announcement of his appointment will then be made.

Mr Branson, considered by ministers as an excellent figurehead for any campaign intended to create more jobs for the young, will be chairman of the scheme's co-ordinating committee.

The campaign is likely to involve the smartening up of derelict, inner-city sites and of run-down properties, as well as tree-planting programmes and nature conservancy. Further initiatives, including a direct attack on litter, will be considered once the co-ordinating committee is established.

It is expected that the Government will initially provide up to £3m to help encourage the private sector to take part.

Report forecasts decline in Midlands job cuts

BY ARTHUR SMITH, MIDLANDS CORRESPONDENT

THE PACE of job losses in the hard-hit industrial Midlands of England should decrease over the next two years, says a report from the Manpower Services Commission, which administers the Government's training and employment policy.

But the report warned that because of the severe competion in manufacturing a "dog-eat-dog" mentality continued to exist, whereby a competitor going out of business, either national or internationally, was "cause for some relief, if not actual rejoicing."

The report, based on information from more than 200 companies, employers' associations and trade unions, points to the year-on-year increase of vacancies notified to job centres of 10.7 per cent in the West Midlands and 7.9 per cent in the East.

BP plans polyethylene plant in Scotland

BY TONY JACKSON

BP CHEMICALS has completed plans to spend an estimated £30m to £40m on a new polyethylene plant at Grangemouth in Scotland. The investment, awaiting final clearance from the BP board, will use technology developed at BP's new plant at Lavera in the South of France, which was formally opened last Thursday.

The group also plans to take over the marketing of polyethylene from its Erdolchemie joint venture at Dormagen in West Germany. The plant's polyethylene output of 300,000 tonnes a year was previously marketed by Bayer, BP's joint-venture partner.

On completion of negotiations with Bayer, described by BP as "near fruition," BP would have European polyethylene capacity of almost 900,000 tonnes a year, just short of the European leader, Enichem of Italy.

Mr Ray Knowland, managing director of BP Chemicals, said a new plant in Germany using the Lavera technology was also a possibility. "We are doing design work on the options which follow our Lavera investment," he said. "It would be surprising if we were not looking at a market the size of Germany."

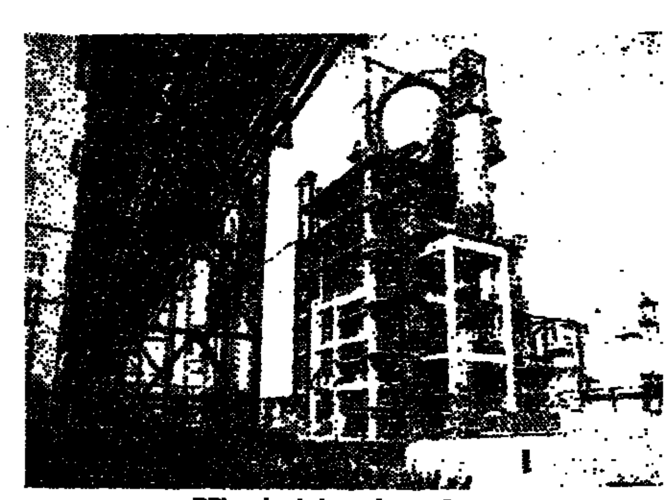
BP has been actively seeking licensees for its Lavera technology, which allows the production of both linear low density polyethylene (LLDPE) and high-density polyethylene (HDPE). Three licences have been sold so far, two to US chemical groups and one to India.

However, Mr Knowland said: "Our policy on licensing is absolutely clear. We will license selectively outside Europe, but we regard the whole of Europe, from Finland to the toe of Italy, as our home market."

The Grangemouth investment is not likely to increase the group's net capacity. Existing capacity at Grangemouth, 100,000 tonnes of HDPE and 80,000 tonnes of conventional low-density polyethylene (LDPE), is among the oldest in the BP portfolio, and is to be closed down.

Mr Knowland said: "Up to now, our policy has been to scrap and build. Sooner or later, we shall run out of old plants to shut down, but we are not in that state of grace yet."

The planned investment underlines BP's increasing commitment



BP's polyethylene plant at Lavera

to the still difficult polyethylene market in Europe, and to LLDPE in particular.

LDPE is one of the most widely used plastics, particularly for plastic bags and wrappings. LLDPE, a recent developed alternative, has advantages claimed for it in cheapness and performance.

BP estimates that LLDPE increased its share of the European low-density market last year from 7.5 per cent to 10 per cent, or 410,000 tonnes, with further growth to 510,000 tonnes expected this year. With present capacity of 140,000 tonnes, BP is Europe's biggest producer, but it has formidable competition from new producers in Saudi Arabia.

BASE LENDING RATES

	%		%
ABN Bank	10	First Nat. Fin. Corp	11
Allied Dunbar & Co	10	First Nat. Sec. Ltd	11
Allied Irish Bank	10	● Robert Fleming & Co	10
American Express Bk	10	Robert Fraser & Ptrs	11
Amro Bank	10	Grindlays Bank	‡10
Henry Ansbacher	10	● Guinness Mahon	10
Associates Cap Corp	11	● Hambros Bank	10
Banco de Bilbao	10	Heritable & Gen. Trust	10
Bank Hapoalim	10	● Hill Samuel	§10
Bank Leumi (UK)	10	C. Hoare & Co	10
Bank Credit & Comm	10	Hongkong & Shanghai	10
Bank of Cyprus	10	Knowsley & Co. Ltd	10½
Bank of Ireland	10	Lloyds Bank	10
Bank of India	10	Edward Manson & Co	11
Bank of Scotland	10	Mase Westpac Ltd	10
Banque Belge Ltd	10	Meghraj & Sons Ltd	10
Barclays Bank	10	Midland Bank	10
Beneficial Trust Ltd	11½	● Morgan Grenfell	10
Brit. Bk. of Mid. East	10	Mount Credit Corp. Ltd	10
● Brown Shipley	10	National Bk. of Kuwait	10
CL Bank Nederland	10	National Girobank	10½
Canada Permanent	10	National Westminster	10
Cayzer Ltd	10½	Northern Bank Ltd	10
Cedar Holdings	11	Norwich Gen. Trust	10
● Charterhouse Japhet	10	PK Finans. Intl (UK)	11½
Citibank NA	10	Provincial Trust Ltd	11
Citibank Savings	¶10.75	R. Raphael & Sons	10
City Merchants Bank	10	Roxburghe Guarantee	11
Clydesdale Bank	10	Royal Bank of Scotland	10
Comm. Bk. N. East	10	Royal Trust Co. Canada	10
Consolidated Credits	10	Standard Chartered	10
Continental Trust Ltd	10	Trustee Savings Bank	10
Co-operative Bank	*10	United Bank of Kuwait	10
The Cyprus Popular Bk	10	United Mizrahi Bank	10
Duncan Lawrie	10	Westpac Banking Corp	10
E. T. Trust	11½	Whiteaway Laidlaw	10½
Exeter Trust Ltd	10½	Yorkshire Bank	10
Financial & Gen. Sec	10		

● Members of the Accepting Houses Committee. * 7-day deposits 5.69%. 1-month 6.03%. Top Tier—£25,000+ at 3 months' notice 9.72%. At call when £10,000+ remains deposited. ‡ Call deposits £1,000 and over 6¼% gross. ¶ Mortgage base rate. § Demand deposit 5.82%. Mortgage 11%.

UK NEWS

Robin Pauley explains why something will have to give in this year's quest for public-sector funding

Spending ministers may be chasing a Treasury mirage

SPENDING MINISTERS clamouring for more cash from the billions of pounds set aside in the public spending reserve for contingencies are chasing funds that do not exist.

The contingency reserve until 1989 appears to have nearly £19bn in it. When ministers get to it, however, and try to touch it, never mind tap it, they will discover that there is really nothing there at all. It has all gone already.

The Financial Statement and Budget Report, the so-called Red Book, published with the budget in March, shows a contingency reserve of £4.5bn in 1986–87 followed by £6.3bn in 1987–88 and £8bn for 1988–89. That continues with a reserve of £5bn for 1985–86, every halfpenny of which had been used up by the end of the financial year.

The contingency reserve used to be an amount prudently set aside in case the need arose unexpectedly for immediate extra cash – a natural disaster, for example.

These days, it has a quite different function. It is part of an elaborate exercise that allows more public spending each year to look like less and *it has taken on the flavour* of a honey pot around which hungry spending ministers buzz each summer as they vie with each other to satisfy their insatiable appetites.

There is a widespread impression that public spending has been cut savagely since Mrs Margaret Thatcher, Prime Minister, took office in 1979, partly fuelled by years of pejorative comments about the public sector from ministers.

In fact, public spending has risen sharply for most of Mrs Thatcher's period in office, but much of the increase has gone on public-sector pay rather than improving services.

That is why concern has mounted about standards in the health and education services and about the declining state of repair of the housing stock at the same time as public spending has soared.

As the Government, trailing in the opinion polls, moves into the last 12 to 24 months before a general election, Tory backbenchers are looking nervously at their prospects and, in growing numbers, concluding that more public spending might help them home. A similar approach preceded the 1983 general election when Mrs Thatcher led ministers on a campaign urging councils to spend, spend, spend on capital projects, and limits for home improvement grants were raised. That increased spending was *choked off after the election.*

The problem this time is that MPs, backed by a number of Cabinet ministers, think they can win substantially higher public spending from Mr John MacGregor, Treasury Chief Secretary, without threatening the fiscal strategy because it can all be funded from the reserve.

Taking the current year first, the £4.3bn will barely suffice. Local authorities are set to spend £2bn more on current account than indicated in the most recent public expenditure White Paper (policy document) together with an extra £500m on the capital account.

In addition, pay rises in the public sector so far have been running far ahead of inflation. Although the Government has stopped announcing public-sector pay targets that are persistently missed by a mile, an assumption (3 per cent) is buried deep in the public-spending figures.

Public-sector pay accounts for about 40 per cent of public spending and each 1-percentage-point rise in overall public-sector pay costs nearly £600m. So if, as appears to be the case, public-sector pay settlements average out at 6 per cent rather than 3 per cent, the full-year cost is around £1.8bn more than planned, although less in the year of settlement as a full financial year is not covered.

The recent award to *nurses*, doctors, armed forces and top-salaried public *servants*, for example, will cost £290m more than planned for in 1986-87, but the full-year cost to be counted into 1987-88 *totals* is £387m more than planned.

Mrs Margaret Thatcher

Mr John MacGregor

It is important not to double or triple-count the pay factor – two thirds of local authority spending is pay and within local government about 80 per cent of education spending is pay, so pay figures largely already in the local authority excess figures.

But there is also a pay impact throughout the rest of the public sector, and after allowing for double counting, all the contingency reserves appear to be all but busted.

Another factor pre-empting the reserve is that once again the assumption that unemployment has at least levelled off has proved premature. The result has been that all social security payment estimates are too low. (If all people entitled to benefits claimed their due, the £40bn social security bill would be between £1bn and £2bn higher and public spending totals would consequently also be higher than *that amount. The Treasury* and Department of Health and Social Security build an assumption of less than total take-up into their annual public-spending calculations.)

Mr Norman Fowler, Social Services Secretary, has already been given an extra £60m for this year to add to National Health Service cash limits as partial help towards the cost of this year's pay award.

On the other hand, the Treasury will have a little help from higher revenues than expected. For example, the high level of pay settlements provides higher income-tax payments than planned and gives people more cash to spend, boosting value-added tax (VAT) receipts. With a little luck and a little creative accounting, the £4.5bn reserve this year may be just enough to keep the £139bn planning total intact.

But 1987–88 looks very difficult even with the £6.3bn reserve. The full impact of this year's high pay levels carries forward to give a higher base than planned for 1987–88 to which that year's pay awards also have to be added. As no planning figures for local authorities were included in the planning totals beyond 1986–87, next year's local-council expenditure in England starts £2bn higher than indicated in the public-spending White Paper on current account, and *about £500m plus inflation plus* the pay factor, which brings it to around £3bn. To that must be added a further 15 per cent to take in Scotland and Wales, making in all about £3.5bn.

After other requirements are taken into account, councils would take £5bn out of the 1987–88 contingency reserve for virtually no new spending – and before any other department had a bite.

Unavoidable demand-led spending such as higher social security payments than planned, together with overall public-sector pay, would more than swallow up the £6.3bn reserve before any consideration of spending designed to allay public anxiety about the social sec*tor. That includes an* extra £1bn for Mr Baker's education service, more cash for hospital equipment, and improvements to prison buildings and staffing levels which Mr Douglas Hurd, Home Secretary, is now considering.

The same arguments carry forward to 1988–89, with both 1986–87 and 1987–88 increases built into the starting point. That means that the local authority, social security and pay impacts are the same but bigger, with the result that the Treasury calculates that the £8bn reserve for 1988–89 is already technically gone before any minister even considers an extra bid for that year.

Something will have to give, and the question for the Cabinet in this year's public spending battle and the Star Chamber of ministers who sort it all out is where the give should be.

The options are to risk further public disquiet by cutting public spending to keep to all the spending totals, a course unlikely to be supported by many in the Cabinet for what may be the last financial year before a general election; to risk disquiet in the City of London and financial markets by easing up on public spending and increasing the planning totals and raising the level of public borrowing; or sacrificing the small amount of tax cuts planned for 1987–88 (likely to be no more than £2bn) and switching that amount of cash into public spending to help to support the programmes for which ministers want more money.

Yet higher levels of asset sales, which under Britain's peculiar method of public accounting count as negative public spending rather than financing of public spending, are unlikely to be an option as they are already planned to be nearly £5bn a year for 1986–87 to 1988–89.

Ideally, Treasury ministers would like lots more claims for more money on the lines of that submitted *last week by Mr Peter Walker,* Energy Secretary: "No bid". But that remains as fanciful a dream as the idea that there is lots of extra spending ready and waiting to be plucked from the contingency reserves.

Company Notices

PRIVREDNA BANKA ZAGREB
USD 50.000.000,—
Floating Rate Notes – 1978/1986

We inform Bondholders that the USD 5 000 000,— instalment due for amortisation on June 25th, 1986 has been met by a draw by lot.
Considering 5.000 bonds are to be redeemed and the draw must be made by series with a *maximum* of 10 bonds, one series of 10 in every two series was taken up and the following bonds are called for repayment with their coupons payable in June 25th, 1986 and subsequents attached:

23858 to 23867,	23878 to 23887,	23898 to 23907,	23918 to 23927,
23938 to 23947,	23958 to 23967,	23978 to 23987,	23998 to 24007,
24018 to 24027,	24038 to 24047,	24058 to 24067,	24078 to 24087,
24098 to 24107,	24118 to 24127,	24138 to 24147,	24158 to 24167,
24178 to 24187,	24198 to 24207,	24218 to 24227,	24238 to 24247,
24258 to 24267,	24278 to 24287,	24298 to 24307,	24318 to 24327,
24338 to 24347,	24358 to 24367,	24378 to 24387,	24398 to 24407,
24418 to 24427,	24438 to 24447,	24458 to 24467,	24478 to 24487,
24498 to 24507,	24518 to 24527,	24538 to 24547,	24558 to 24567,
24578 to 24587,	24598 to 24607,	24618 to 24627,	24638 to 24647,
24658 to 24667,	24678 to 24687,	24698 to 24707,	24718 to 24727,
24738 to 24747,	24758 to 24767,	24778 to 24787,	24798 to 24807,
24818 to 24827,	24838 to 24847,	24858 to 24867,	24878 to 24887,
24898 to 24907,	24918 to 24927,	24938 to 24947,	24958 to 24967,
24978 to 24987,	24998 to 25007,	25018 to 25027,	25038 to 25047,
25058 to 25067,	25078 to 25087,	25098 to 25107,	25118 to 25127,
25138 to 25147,	25158 to 25167,	25178 to 25187,	25198 to 25207,
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25938 to 25947,	25958 to 25967,	25975 to 25984,	25995 to 26004,
26015 to 26024,	26035 to 26044,	26055 to 26064,	26075 to 26084,
26095 to 26104,	26115 to 26124,	26135 to 26144,	26155 to 26164,
26175 to 26184,	26195 to 26204,	26215 to 26224,	26235 to 26244,
26255 to 26264,	26275 to 26284,	26295 to 26304,	26315 to 26324,
26335 to 26344,	26355 to 26364,	26375 to 26384,	26395 to 26404,
26415 to 26424,	26435 to 26444,	26455 to 26464,	26475 to 26484,
26495 to 26504,	26515 to 26524,	26535 to 26544,	26555 to 26564,
26575 to 26584,	26595 to 26604,	26615 to 26624,	26635 to 26644,
26655 to 26664,	26675 to 26684,	26695 to 26704,	26715 to 26724,
26735 to 26744,	26755 to 26764,	26775 to 26784,	26795 to 26804,
26815 to 26824,	26835 to 26844,	26855 to 26864,	26875 to 26884,
26895 to 26904,	26915 to 26924,	26935 to 26944,	26955 to 26964,
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27055 to 27064,	27075 to 27084,	27095 to 27104,	27115 to 27124,
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27215 to 27224,	27235 to 27244,	27255 to 27264,	27275 to 27284,
27295 to 27304,	27315 to 27324,	27335 to 27344,	27355 to 27364,
27375 to 27384,	27395 to 27404,	27415 to 27424,	27435 to 27444,
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27688 to 27697,	27708 to 27717,	27728 to 27737,	27748 to 27757,
27768 to 27777,	27788 to 27797,	27808 to 27817,	27828 to 27837,
27848 to 27857,	27868 to 27877,	27888 to 27897,	27908 to 27917,
27928 to 27937,	27948 to 27957,	27968 to 27977,	27988 to 27997,
28008 to 28017,	28028 to 28037,	28048 to 28057,	28068 to 28077,
28088 to 28097,	28108 to 28117,	28128 to 28137,	28148 to 28157,
28168 to 28177,	32518 to 32526,	32537 to 32546,	32557 to 32566,
32577 to 32586,	32597 to 32606,	32617 to 32626,	32637 to 32646,
32657 to 32666,	32677 to 32686,	32697 to 32706,	32717 to 32726,
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32917 to 32826,	32837 to 32846,	32857 to 32866,	32877 to 32886,
32897 to 32906,	32917 to 32926,	32937 to 32946,	32957 to 32966,
32977 to 32986,	32997 to 33006,	33017 to 33026,	33037 to 33046,
33057 to 33066,	33077 to 33086,	33097 to 33106,	33117 to 33126,
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37946 to 37955,	37966 to 37975,	37986 to 37995,	38006 to 38015,
38026 to 38035,	38046 to 38055,	38066 to 38075,	38086 to 38095,
38106 to 38115,	38126 to 38135,	38146 to 38155,	38166 to 38175,
38186 to 38193.			

The following Banks will carry out the redemption of the bond and the payment of interests due on June 27th, 1986:

CREDIT LYONNAIS, Luxembourg - **CITIBANK N.A.**, New-York - **SOCIETE GENERALE**, Paris.

Amount remaining in circulation after this nineth instalment:

USD 5.000.000,—

The Fiscal Agent

CREDIT LYONNAIS LUXEMBOURG

UK NEWS

Ford unveils plans for sharp rise in output rate

BY KENNETH GOODING, MOTOR INDUSTRY CORRESPONDENT

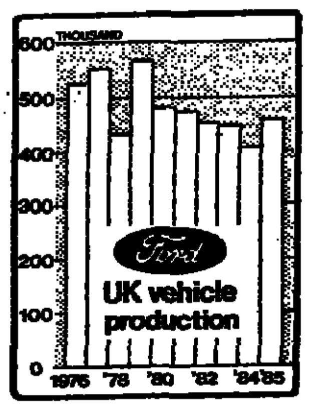
FORD has told suppliers it is stepping up its vehicle production rate in the UK to 500,000 a year, a level not reached since the end of the 1970s.

The message was delivered by Mr Bill Hayden, Ford of Europe vice-president, manufacturing, who urged suppliers to be prepared to raise their own output.

And Mr Sam Toy, shortly to retire as chairman of Ford of Britain, has told the unions: "Give us the cars, we can sell all you can make."

The company said at the weekend that it was relatively short of cars and had only 80,000 in stock compared with 100,000 at this time last year.

Ford recently recruited more than 300 people to boost output of the Sierra at Dagenham, in Essex even though the company has a voluntary redundancy and early retirement scheme.



Last year Ford produced about 455,000 cars and commercial vehicles, up from 406,000 in 1984 when output was badly dented by industrial disputes.

Dagenham, which also makes some Fiesta models, is producing 1,000 cars a day – "unheard of for years," according to Ford. At Halewood on Merseyside, where the Escort/Orion range is made, the factory has been hitting the 950 a day output target for some weeks.

Ford has been under pressure for some time from the UK Government to produce more cars in Britain, where it is market leader and accounts for more than 25 per cent of new car sales.

The steep rise in the value of the D-mark from DM 4 to the pound last July to DM 3.4 has given Ford an added incentive to cut imports from its West German factories.

Pan Am sets up security force

BY LYNTON McLAIN

PAN AMERICAN World Airways has set up its own airline security unit with an "elite corps" of former police and intelligence officers to combat terrorism and its adverse impact on passenger traffic.

The skills of the "Alert" unit are to be made available to other airlines on a contract basis, but Pan Am was unable to say yesterday when the service would be available to its competitors.

The Alert service has been approved by the US Federal Aviation Administration. Pan Am wants talks with the UK transport department, which co-ordinates civil aviation security at UK airports.

The airline is already working with UK Government security agencies, including the Metropolitan Police.

The Alert service was announced to Pan Am executives by Mr C. Edward Acker, Pan Am chairman and chief executive, who said international terrorism was the single most serious crisis facing the airline and travel industries.

Brighter growth prospects forecast

By George Graham

OUTPUT has stagnated in the main industrialised countries this year, but the London Business School (LBS) *forecasts rapid growth* from now on as the benefits of lower oil prices materialise.

In 1979, when oil prices rose, the initial effect was expansionary, the LBS says, as people rushed to buy goods which they saw would rise in price as higher oil costs took effect. The downswing, when it came, was all the worse because of the unusually high stock levels that had built up.

The same process is now happening in reverse, the LBS says in its world economic outlook. Buyers are holding off, anticipating the fall in prices that will follow the reduction in oil costs, and when they do finally start buying, the upswing will be even stronger as pent-up demand is unleashed.

The LBS forecast for world economic growth in 1986 has therefore been revised downwards, while for 1987 it forecasts real growth nearing 5 per cent.

"This is well above the figure obtained by adding up consensus forecasts for the major economies," the LBS says, "and it is hard to persuade practical men that an upswing on this scale – which is similar in magnitude to that of 1984 – is in prospect, especially when the *current position is so depressed.*"

The LBS says it is clear that the fall in oil prices has given an enormous boost to spending power in the industrialised member countries of the OECD.

"The reduction in oil prices is equivalent to a reduction in indirect taxes worth some 3 per cent of world gross national product," it says. "In the UK the injection of demand is worth £9bn, although here this is offset, as it is not elsewhere, by the loss of oil revenues."

If a country expanded on its own at this rate, it would normally see a sharp increase in imports, which would be expected to meet between two-thirds and three-quarters of the extra demand.

But because the oil price cut affects the whole OECD area simultaneously, any increase in imports is expected to be offset by an increase in exports, so domestic production receives a strong boost.

The LBS says it is important that world monetary growth should not suddenly be slowed because of a US-led rise in world interest rates, but it sees this as unlikely.

The fall in the dollar may well bring the long decline in US interest rates to an end, but the LBS expects world interest rates to remain at or below present levels as other countries exchange rates rise against the dollar.

Warning to engineers on need to adapt

By Nick Garnett

BRITAIN'S professional engineers have been told that many of them are in danger of becoming obsolete because they are failing to advance their skills in the face of technological change.

Unless this alters, many will be left to design and maintain inadequate production systems and poorly manage their companies' resources.

This failure to adapt to technological developments was one of the main criticisms of engineer training made in the inaugural address to the Institution of Plant Engineers by its new president, Mr Harry Bryant.

At the institution's annual general meeting at the weekend, Mr Bryant, an engineer and co-ordinator of the open learning programme at Southampton Institute of Higher Education, said it was still assumed that a single period of training for a professional engineer was sufficient.

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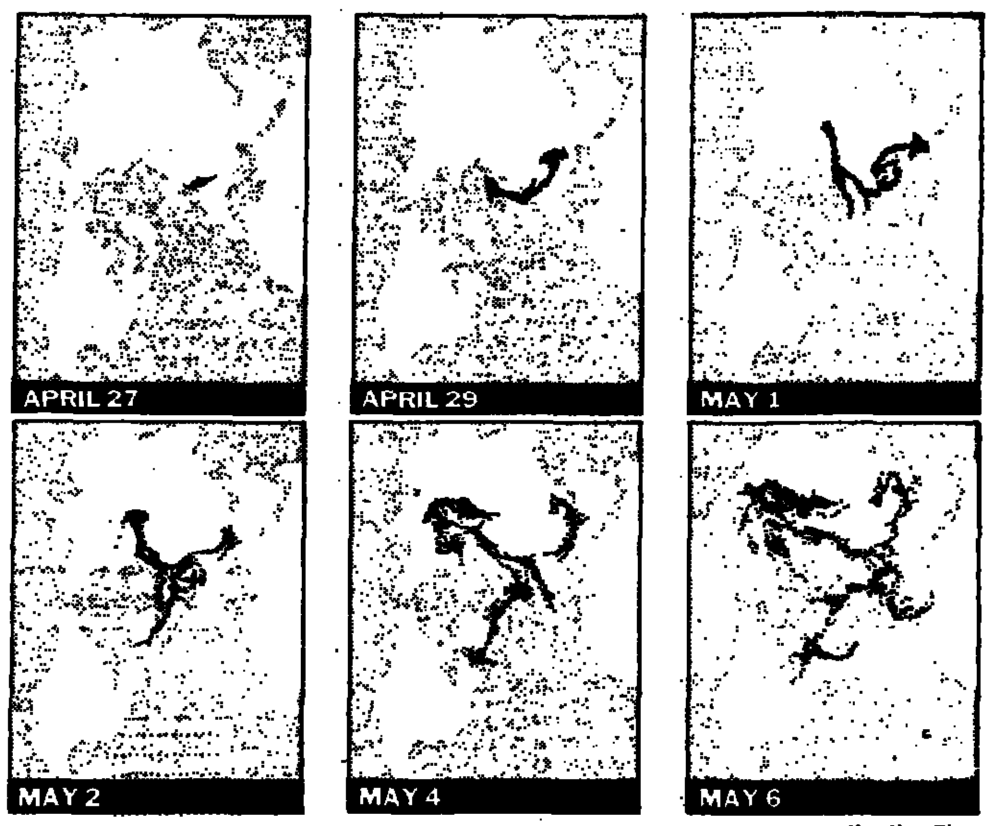
Nuclear Industries

The nuclear power industry is in shock after Chernobyl, the accident it was confident could not occur and which still has not been fully explained. Dominating this week's European Nuclear Congress in Geneva are the consequences for the Soviet Union's neighbours of the reactor which ran amok.

The 'impossible' happens

BY DAVID FISHLOCK, SCIENCE EDITOR



New York Times

The Chernobyl cloud

How the fallout spread from Chernobyl. This reconstruction of the paths taken by the main tongues of radioactivity is based on US Air Force weather data and a computer simulation by the Lawrence Livermore National Laboratory of the US Department of Energy. It shows how the plume, caught in different airstreams and at various heights, was driven in several different directions during the first nine days, to contaminate more than a score of countries.

THE NUCLEAR power industry is already, to a remarkable degree, an international community with a common language (English) and such institutions as the International Atomic Energy Agency of the United Nations, and OECD's Nuclear Energy Agency.

The "internationalisation" of what began as a secretive, highly-nationalistic activity confined to a very few nations started over 30 years ago with President Eisenhower's "Atoms for Peace" mission in 1954. Today, 26 nations, 10 of them in western Europe, obtain their electricity from nuclear reactors.

But nationalism has nevertheless continued to dominate certain key facets of the industry, in particular reactor safety concepts, which are bound up *both with a nation's engineering* traditions and philosophy and with the importance most nations attach to the security of energy supplies.

Reactors do not yet move freely across international boundaries, in the way that airliners are licensed by international convention as safe to enter and land in any nation's airspace. So few countries were willing to admit the handful of nuclear-powered commercial ships to their ports, and they have all been abandoned as uneconomic with the sole exception of ice-breakers operated by the USSR.

A reactor which meets the approval of one country's safety and licensing system may be rejected by another, not because it is less safe, but simply because the requirements are *different*. For this reason, Canada's Candu reactor is unacceptable to the licensing authorities in Britain and West Germany, as are US designs of light water reactor. The USSR's design of pressurised water reactor had to be provided with a containment as well as new instrumentation to make it acceptable in Finland.

Europe failed dismally in the 1960s to win acceptance for a European (Euratom) reactor design. Mostly, Common Market members chose US designs and *adapted them to their own* engineering traditions. So deeply entrenched are these traditions that even by the mid-1980s the European fast reactor club has agreed that it will make faster progress if it designs its proposed three demonstration re*actors to the safety requirements* and licensing requirements of the three host nations, rather than aim at the outset for the common European fast reactor design which is the club's ultimate objective.

The accident at Chernobyl on April 26 has brought the weaknesses and omissions of the international nuclear community into sharp relief. The Soviet Union, with a nuclear power programme second in size only to the US—it has commissioned nearly 60 reactors, compared with 100 in the US—is only tenuously part of the international community, mainly through the IAEA in Vienna.

It evidently felt under no obligation to give even its Comecon nuclear partners on its own borders early warning of its accident. It contacted the IAEA only when the accident threatened to get out of hand.

Yet Chernobyl was—and still is — an international nuclear disaster, of the kind the industry has been designing against from day one. Already the nuclear industry is talking of two eras, BC (before Chernobyl) and AD (after the disaster).

● BEFORE CHERNOBYL

A comment from Finland, planning a fifth and bigger *reactor to add to its four star* performers in the world reactor league, sums up the outlook for nuclear power until Chernobyl exploded. The technology was "in fair wind" with the Finns, who had just begun the licensing process for the project.

Europe, with 145 reactors in operation, is committed to nuclear power for about one-third of its electricity. But the spread is uneven, and heavily concentrated in western Europe, where France is close to two-thirds supplied by nuclear electricity, while Italy has only about 4 per cent. Sweden and Finland each obtain well over one-third of their electricity from nuclear reactors, while neighbouring Norway and Denmark have none of their own.

The accident at Three Mile Island in 1978 caused every European nation to pause and reconsider, not least because they were mostly committed to the kind of reactor—the PWR—which had run out of control. Austria, Sweden and Switzerland all held referenda. Austria voted against nuclear power, which meant increasing dependence on electricity imports; the other two voted for more reactors.

West Germany and Britain, by electing governments which favoured nuclear power, endorsed ambitious plans for expansion not only of their inventory of reactors but of fuel factories, including enrichment and reprocessing plants. In Britain's case, however, seven years of Conservative government have produced no new reactor orders yet.

The Netherlands, a pioneer of nuclear power in Europe, which had been seduced away by North Sea gas, had [illegible] plan its re-entry with two big new reactors.

The prevailing view was that Europe had adequately safeguarded itself against the possibility of a major accident, both through engineering design and through training. The lessons of Three Mile Island were learned, especially with regard to the experience and training of operators.

Europe had also negotiated a series of bilateral agreements between governments to inform of any trans-boundary releases of radioactivity, for example from the numerous French nuclear facilities along the English Channel in the direction of the UK.

The lessons of Three Mile Island had increased the cost of a technology which had already escalated rapidly in price in the 1970s, as a consequence of soaring fossil fuel prices. Nevertheless, the economics of nuclear power remained robust for a Europe in which fossil fuels are scarce and costly to recover, while natural energy sources have failed to meet basic tests of reliability as well as price.

The strongest evidence of economic advantage came from France, which committed itself wholeheartedly to nuclear energy in 1973, and also adopted a highly-standardised approach to design and construction to minimise the capital costs. This is an advantage few other countries have yet enjoyed; certainly none outside the USSR to the same extent as France.

As a result, France has become Europe's main exporter of electricity, able to sell its surplus power at attractive prices to all neighbouring countries including Britain via the newly-laid cross-Channel cable.

Britain has signed a two-year contract to take 1,000 MW of French electricity at a price the industry says is more than 25 per cent cheaper than it can generate itself. The French are said to have made tempting offers of much larger contracts for longer periods, but they raise political problems for Britain.

The latest review of comparative costs of coal and *nuclear stations by the OECD's* Nuclear Energy Agency, published in April, concludes that nuclear energy in Europe will have a clear economic advantage of 20-80 per cent in generating costs for capacity commissioned in the mid-1990s. The nuclear reactors used for the assessment are light water reactors of 900-1,400 MW output, operating with a load factor of about 72 per cent over a 25-year life, and calculated with a 5 per cent (real) discount rate.

● AFTER CHERNOBYL

Economic arguments, however compelling, will carry little weight with public opinion in the West if there is widespread belief that reactors in general are too dangerous to live with.

The explanation given officially by Moscow to account for the explosion is still incomplete. In fact, it adheres closely to an explanation proposed in the West within days of the accident. It certainly omits to say what started the troubles that led to an explosion and fire above the reactor.

Was it an operator's error that the safety systems on the Russian-designed RBMK reactor were not designed to accommodate? Was it some possibility that all reactor designers, East and West, have overlooked? Not until late May was it admitted that the reactor was being used experimentally when it exploded.

Only when the full sequence of events at Chernobyl has been spelled out to an international panel of safety experts at a formal "post mortem" can the industry verify its own probability estimates showing that such an accident must be extremely rare.

If these events contradict current estimates, the loss of confidence throughout the industry itself will be profound. Even if the events at Chernobyl confirm the industry's accident probability estimates, there will remain the daunting task of regaining public confidence.

The impact of the Soviet disaster on European countries' power plans is assessed here and on page 4 by FT correspondents.

Cost considerations enter the equation

By Max Wilkinson

Resources Editor

AS THE more extreme reactions to the Chernobyl nuclear disaster begin to subside the focus of public attention has begun to shift from doubts about the safety of nuclear ower to its cost.

The two questions are intimately linked. At the broadest policy level there is little chance that governments will subject society to the perceived risks of nuclear power—however small these may be claimed to be — unless the nuclear option is demonstrably much cheaper.

It is worth pausing to remember that the expected lower costs of nuclear power did not always have such a pre-eminent place among the arguments in its favour. A decade ago, it was promoted as a source of power *which could be made without* polluting the atmosphere; it was seen as an answer to deeper anxieties about what would happen "when the oil ran out" and more generally when fossil fuels became exhausted or scarce.

Nuclear power has also been seen as an *important strategic* bulwark against the threat of special interest groups, ranging from British miners to the Organisation of Petroleum Exporting Countries.

However, there has been a growing understanding that all these separate considerations can be reduced in an important sense to a single comparison of costs. For example, the argument that nuclear power is less polluting would lose some of its force if all coal-fired power *stations were fitted with expen*sive equipment to removed sulphur from the smokestacks.

Similarly, it now generally understood that fossil fuels will not be suddenly exhausted for many many decades, and perhaps for centuries; they will just become more expenisve.

Even the possibility of another sudden increase in the oil price by Opec does not necessarily tip the balance in favour of nuclear power. Unless the nuclear option is demonstrably cheaper, some of the industrial countries might do better to spend their money on *energy conservation and coal*-fired power stations.

The intense public discussions over Chernobyl has also brought out the close relationship between *safety* and costs. Although fundamentalist opponents of nuclear power say that it can never be adequately safe, professional debate has for many years centred on the costs of making nuclear power safe. Indeed, a very high proportion *of the* capital cost of modern nuclear power stations represents the price of safety.

As the level of safety demanded by public opinion is subject to such enormous changes, a large element of uncertainty is now built into the cost of new power stations. Even existing stations might require substantial capital expenditure to bring them up to some future standard of safety.

One of the most obvious lessons from Chernobyl therefore is that the cost of nuclear power is subject to much *greater uncertainties than the* industry is often willing to admit.

The nuclear industry throughout the world has sometimes done itself a great disservice by the spurious precision of calculations intended to show the superiority of nuclear energy. *Capital costs have in the past* been double or even three times the initially planned amounts.

The industry may claim that *as a result of experience* these over-runs need not be repeated. And France's spectacularly successful programme has shown that new plant can indeed be built on time and to a price.

However, after the Chernobyl *accident it will be necessary* to take another look at the calculations which have suggested that the higher costs of building nuclear plants are more than recouped by the lower running costs.

The latest study by the Paris-based Nuclear Energy Agency* suggests that in almost all countries nuclear energy still has a decisive economic advantage over coal on the set of assumptions used. The exceptions were in parts of the US and Canada where a coal-fired station could be sited next to *sources of cheap coal.*

In France electricity from a new coal station is estimated to cost about 80 per cent more than from a new nuclear station over the 25-year life of the plants. In West Germany the cost might be 70 per cent more, assuming de-sulphurisation *equipment* were *fitted to the* coal station.

In the UK, a new coal station would produce power at 40 per cent higher cost than the proposed new pressure water reactor, Sizewell B. However, a follow-on nuclear reactor would have an advantage of about 70 per cent.

These figures allow considerable margins for over-runs in the cost of building a nuclear station. *In Europe, Japan and* Canada the NEA estimates that on the assumpitons of its "reference case" nuclear investment costs could rise in real terms by between 33 per cent and 175 per cent before nuclear power lost its cost advantage.

These are quite impressive figures, but the assumptions behind them have to be carefully considered. Perhaps the most critical is the assumed rate of interest which is attributable to the capital cost. A real rate (after inflation) of 5 per cent is used in all countries *other than France (9 per* cent) and Belgium (8.6 per cent).

Some commentators believe 5 per cent is too low a discount rate, and that nuclear plant should be judged against a 10 per cent rate of return which is more appropriate to industry.

Using a 10 per cent rate of return, France's nuclear stations would still have a cost advantage of about 20 per cent over coal-fired plant. However, the UK's proposed Sizewell B would produce slightly more expensive electricity than a new coal station, while in Germany the nuclear advantage would be cut to about 23 per cent.

In the US, where capital costs have been much higher, nuclear electricity would be almost twice as expensive as power from coal.

The figures are also quite sensitive to the assumptions about coal prices over the next 30 years, which in any case are difficult if not impossible to forecast.

There must be significant uncertainties too about the cost of waste disposal and the eventual cost of decommissioning nuclear plants. Although these have all been included in national cost estimates, the technocrats have been far too sanguine about the ease with which the waste can be disposed of.

In a highly-charged political atmosphere, it may be increasingly difficult for the nuclear industry to convince the public that nuclear power is in fact cheap enough to be worth the worry.

** Projected cost of generating electricity from nuclear and coal-fired power stations for commissioning in 1995 (Nuclear Energy Agency, OECD, Paris).*

Slower response on Sizewell B

The UK

DAVID FISHLOCK

MR EDDIE RYDER, Britain's chief nuclear inspector, was probably out of order when he told a small group of journalists that for the nuclear industry nothing would ever be the same again, and went on to forecast a period of reflection before further nuclear industry decisions were taken. As a senior civil servant he was making public comments which British convention says should come from his political masters.

Nevertheless, the comments themselves were sensible and sound. They were made just as word arrived that the radioactive fallout from Chernobyl had reached Britain, 1,200 miles away. It was, he said, "the sort of accident the nuclear industry has been designing against ever since it was set up."

Ten days later Mr Peter Walker, Energy Secretary, winding up the nuclear debate in Parliament, said the govern*ment would await not only the* report of the Sizewell public inquiry but also what emerged from the International Atomic Energy Agency about the Chernobyl accident.

"We will then carefully discuss and debate the potentiality of nuclear energy in the years to come."

Mr Kenneth Baker, Environment Secretary, opening the same debate, had warned that Chernobyl would have a profound effect on people "who vividly have been brought face to face with the possible con*sequences of a nuclear* accident."

What the nuclear industry appears to have lost is any prospect of a "fast track" response to Sir Frank Layfield's report on the proposed Sizewell B, on Britain's east coast, this autumn. Mr Walker has emphasised the "quality and duration" of this investigation into, in essence, the safety of nuclear power.

The government had planned to respond swiftly to findings it had every reason — from the progress of the two-year inquiry — to believe would confirm its confidence in nuclear energy. It had hoped that by early next year Britain could set in motion a new series of nuclear stations, totalling 5,000-6,000 Mw, for completion by the mid-1990s.

It is unrealistic to think that the Layfield inquiry might be reopened to take account of Chernobyl. But it is certainly realistic to think that politicians will scrutinise what is expected to be an exceptionally detailed report for any misgivings it may hint at, about the safety of the Central Electricity Generating Board's plans for embarking on the highly anglicised version of the Westinghouse Electric pressurised water reactor.

Mr Baker assured MPs that the nuclear industry "is the most regulated industry in the country, subject to no fewer than 15 Acts of Parliament and sets of regulations." This did not deter him, however, from reimposing a restriction requiring *every* radiation-related incident, however slight, to be reported to ministers.

It had taken three years of pleading to get a restriction first imposed in 1977 relaxed slightly in 1982, in the hope of reducing opportunities of nuclear energy's opponents to make damaging capital.

Before Chernobyl, the industry's prospects had begun to look brighter than for several years. Two of its three main projects, the new advanced gas-cooled reactor (AGR) stations at Heysham and Torness, designed and constructed by the National Nuclear Corporation, are nearing completion, on schedule, giving the industry confidence that it can build big modern nuclear plant on time, as it did the nuclear factories of the 1950s. The most optimistic were even talking of power before the end of the year.

The third major *project, the* thermal oxide reprocessing plant at Sellafield, is being designed and project-managed by British Nuclear Fuels.

About £400m of an estimated *total* cost of £1.65bn has been spent on Thorp, which is on schedule for completion by 1990. In April the CEGB and the South of Scotland Electricity Boards signed contracts worth £1.6bn with BNFL to reprocess spent AGR fuel to the end of the century.

These contracts complete the order book for the first 10 years *of Thorp's* operations at a designed throughput of 600 tonnes a year. Mr Neville Chamberlain, the new chief executive of BNFL, described it as one of Britain's biggest capital projects which in its first decade would bring in more than £4bn of business, two-thirds of it from overseas.

The domestic power companies have also agreed to order a dry store for spent AGR fuel, as insurance against any protracted hold-up in what is envisaged as a continuous reprocessing operation similar to *that operated by BNFL for* Magnox fuel. The dry store will hold up to a year's total output of AGR fuel in an argon atmosphere, secure from any corrosion The £200m contract is expected to go to the NNC, for a site still to be disclosed by the power companies.

The siting of the first of a series of repositories for nuclear wastes has continued to give the industry a major headache in its relations with the British public. The situation was exacerbated by a report from the Select Committee for *the Environment in* March, which correctly identified the problems but incorrectly ascribed the blame to the nuclear industry when rightly it should have identified vacillation by politicians.

Its error was pointed out bluntly by Prof Paul Matthews, who heads the independent Radioactive Waste Management Advisory Committee of the Department of the Environment. In a letter to the Environment Secretary, Prof Matthews said the report "seriously underestimated the extent to which considerations of expediency and action—or inaction—specifically at parliamentary level have been responsible for the disastrous stop-go policy."

This could now prove to be a comment appropriate not just to Britain's nuclear waste policy *but to nuclear industry progress* overall. Nuclear construction is unlikely to proceed as fast as seemed possible pre-Chernobyl

The economic advantage of nuclear power will be available to several of Britain's trading rivals, such as France with three times its nuclear capacity, Sweden (more than double), West Germany (double) and Japan (double) for many years longer than was expected only a month or so ago.

Scepticism over atomic reliance

France

DAVID MARSH

PROFITING from a pro-nuclear consensus which has been the envy of energy planners in Britain, the US and West Germany, Electricité de France, the state-owned utility which is in charge of the world's most concentrated nuclear electricity programme, is unlikely to face any near-term problems in continuing to extend the size of France's atomic power network.

Last year it provided 65 per cent of the country's electricity. But the overall longer-term impact, both direct and indirect, of the Soviet disaster on the French nuclear industry can only be a negative one.

Although it is much too early to talk of a break-up in the country's nuclear consensus, the accident looks likely to have planted seeds of scepticism in France over its heavy reliance on nuclear power.

This could eventually spark off a repeat of the opposition which characterised the early years of France's pressurised *water reactor (PWR) building* drive in the 1970s.

Public opinion in France swung round to acceptance of nuclear power for a variety of inter-locking reasons. In ascending order of importance, these are: the undoubted engineering skills of the *French nuclear industry*; the lack of a significant French nuclear disarmament movement, skilful promotion and lobbying by the Commissariat à l'Energie Atomique (CEA) and by EdF (which dispenses large sums to secure support from municipalities close to *nuclear plant sites*), and the lack of alternative indigenous energy resources.

But in the wake of Chernobyl, and of the French authorities' failure to tell the people that, in spite of initial denials, a cloud of radioactivity did after all pass over the country (even at levels unlikely to cause any significant danger to health), public opinion may be less malleable in the future.

Thanks to the rapid pace of nuclear plant ordering at the *end of the 1970s and the begin*ning of the 1980s, the nuclear industry has plenty of work in hand for already-authorised power stations for the next few years.

A total of 17 French N-plants — 14 1,300 Mw units, two 900 Mw and one 1,450 Mw — *are currently under construc*tion and planned to be brought into full service between 1986 and 1991, with another one under order. This adds to the present network of 44 constructed plants (not all of them yet fully in industrial service) — four gas-graphite reactors, *two fast breeders and* 38 PWRs.

The real problem facing the French industry will be how to adapt towards the end of the decade to the run-down in recent orders. From a peak of six to eight orders of 900 Mw plants a year under the Giscard administration in the 1970s, the ordering level (now centring on the larger 1,300 Mw and 1,450 Mw units) has fallen to three in 1982, two for 1983 and 1984 and just one a year for 1985 onwards.

Framatome; the French *PWR* company, in which the nationalised Compagnie Generale d'Electricité group has a 40 per cent stake, had earlier been pinning its hopes to export orders to compensate for the downturn in domestic business.

But successes in Belgium, South Korea, South Africa and this year, after long draw out bargaining, in China, have been realised with growing difficulty.

Several developing countries which looked important potential clients five years ago have slipped from sight on *cost and grounds of non*-proliferation.

In April, China dashed Framatome's already-fading hopes for a follow up-order for the Daya Bay plant by announcing a drastic slowdown in its nuclear programme.

The Chernobyl disaster, allied to this year's fall in the oil price, may have delivered the coup de grâce to further plans.

Framatome is still an exceedingly profitable company by French standards. It chalked up net profits of FFr 656m on turnover of FFr 9.65bn last year. But it is banking on diversifying into sectors ranging from robotics and artificial intelligence to building desalination plants to assure profits at the end of the 1980s.

To shield itself from the direct effect of the slowdown in new plant orders worldwide, Framatome is also building up increased business in nuclear maintenance — including in countries such as the US. It hopes that, as the going gets increasingly tough for competitors whose home markets are hit by cancellations and falling confidence, the basic solidity of the French *nuclear market* should continue to stand it in good stead abroad.

Cogema, the CEA subsidiary which operates the world's only commercial reprocessing plant for PWR fuel at La Hague in Normandy, may breathe more freely because of the likelihood that *competitive reprocessing* projects in West Germany and Japan, mooted for the 1990s, may now be delayed or shelved altogether.

But Cogema knows that whatever the apparent isolation of the French nuclear industry from the disruptive currents *affecting the rest of the world*, events which damage the international atomic business can hardly fail, one day, to have an impact in France too.

Europe's nuclear power

	Commercial reactors operating in W. Europe	Reactors under construction	% nuclear electricity 1985
Belgium	8	0	60
Finland	5	0	38
France	44	17	65
West Germany	20	5	31
Italy	3	2	4
Netherlands	2	0	6
Spain	8	3	24
Sweden	12	0	43
Switzerland	5	0	40
UK	38	4	19*

* Scotland 45 per cent.

Source: Foratom (Forum Atomique Européen).

Freeze on plans

The Netherlands

LAURA RAUN

THE Netherlands' ambitious plans for at least two new nuclear power plants have been delayed, perhaps for years, by the Chernobyl disaster.

The proposal for two or more reactors with a combined generating capacity of about 2,000 Mw is among the biggest nuclear projects outside France at the moment. But the Centre-Right government of Mr Ruud Lubbers, the Prime Minister, had no choice but to freeze its nuclear plans until the Chernobyl accident is thoroughly understood. Only then will a decision be taken on whether to go ahead with the plans.

The Christian Democrat-Liberal government seems unlikely to take a more definitive stand in its new coalition accord following the May 21 victory in the general elections. The centrist Christian Democrats and the Right-of-centre Liberals have little to gain by recommit*ting themselves to nuclear* expansion at the moment. Far better to wait for the Chernobyl fallout to settle.

Mr Lubbers initially maintain a tough line, arguing that the Russian accident was no reason to halt the Dutch civilian nuclear energy programme. But *the political realities of public* opinion soon became clear and the tough talk gave way to vaguer mumblings.

The Christian Democrats as well as the Liberals have hinted about delays of years and Mr Lubbers has even suggested that one of the Netherlands' two, *small, oldish nuclear plants* might have to go.

The electricity utility industry has indefinitely closed its nuclear construction bureau that was supposed to have invited bids from the industry in May for building the proposed pair of reactors. The two together were estimated to have cost about Fl 10bn and to have provided a healthy boost for the industry. Now the Dutch electricity industry is even indicating that it might drop nuclear power entirely from its energy plan and rely on other sources.

The electricity producers argue that after three years they cannot wait any longer to decide how many nuclear generators and how many coal ones *to build to cover Holland's* projected energy shortage over the next 15 years. The inevitable delays in the nuclear plans could well mean that the electricity producers turn to gas, coal, wind and sun.

Gasunie, the national gas utility, has warned, however, that it opposes extra sales to power stations to make up for a lack of nuclear power.

Mr Lubbers' government decided in January 1985 to approve the construction of a minimum of two new nuclear plants, each with a capacity of 900 to 1,300 Mw, to fill the country's energy needs by the year 2,000. Parliament went along with the Cabinet's decision with amazingly little fuss given the country's long and often bitter opposition to nuclear energy.

Decades of often vitriolic *public debate kept new nuclear* power stations at bay, leaving the Netherlands with only a relatively small 6 per cent of its electricity generated by nuclear energy. The only two existing nuclear plants are the 450 Mw pressurised water reactor built in Borssele in 1973 by Kraftwerk *Union* and the experimental 50 Mw boiling water reactor built by General Electric of the US in 1969 at Dodewaard.

Increased public doubts about safety

West Germany

RUPERT CORNWELL

IN NO European country has the disaster at Chernobyl cast greater doubt over the future of the domestic nuclear power industry than West Germany.

Even before news of the calamity emerged on April 28, the Bonn Government faced a potent anti-nuclear lobby, although a narrow majority favoured a continuation of the programme.

Now, according to the weekly magazine Der Spiegel, seven West Germans in 10 believe that no more such power stations should be built. The whole issue, sharply dividing the Centre Right Government and Social Democrat opposition, looks fated to play an important role in the campaign for the *federal elections next January.*

If such a finding is correct (and the public anger, bordering on hysteria, over the health risks arising here as a result of the Soviet accident suggests that it is) then the portents are grim for the West German industry, notably for the main nuclear power plant contractor, the Siemens subsidiary Kraftwerk Union (KWU).

West Germany now has 20 nuclear stations in operation. They supply some 17,200 Mw of energy annually, equivalent to over 30 per cent of the country's electricity requirements. A further five stations are either under construction or ready to go on load.

Eight more are at the planning stage, as well as a bitterly contested reprocessing plant at Wackersdorf in Bavaria, where massive and sometimes violent demonstrations have occurred since preliminary clearing work on the *site began last autumn.*

The safety and reliability record of West German nuclear stations, most of which have pressurised water reactors, is second to none. According to the Deutsche Atomforum agency, average capacity availability last year was an unequalled 85 per cent.

Nor was it by chance that Bonn was among the first western capitals to which the Russians turned, however ambiguously, for assistance after the disaster.

Yet, as Siemens reported in early May, KWU had received no new orders, either domestic or foreign, so far this year. In March, China and Egypt respectively shelved and stalled power station contracts worth a total of $38bn, which KWU had entertained high hopes of winning.

At home, almost every station under construction has been under fire from environmental *bodies, including* the radical Green party. In the state of Hesse, Green participation in government there had in practice already ruled out a go-ahead for a third station at the Biblis complex north of Mannheim, while a decline in projections of domestic energy needs did not help the nuclear lobby.

In 1984-85 the delivery of three new nuclear plants helped to increase KWU's turnover by DM 9bn to a record DM 11.4bn, and profits to DM 606m from DM 203m in 1983-84. But in the current year sales are likely to fall by a third. In the absence of new orders, says Mr Klaus Barthelt, chief executive of KWU, the downward slide is likely to quicken only as the decade draws to a close.

Since Chernobyl, political protest has multiplied tenfold. Moreover, the Greens hold on present indications, the key to the June 15 vote in the important state of Lower Saxony, home of another controversial site. This is the intermediary used-fuel storage facility at the so-called "nuclear park" at Gorleben, where separate demonstrations were already frequent before Chernobyl.

Now the Green Party is *demanding* that *all* nuclear power stations be closed down at once, despite government insistence that better technology and rigorous safety requirements make an accident like Chernobyl impossible in West Germany.

The *Social* Democrats are more cautious, speaking merely of a "future withdrawal" from nuclear power. But they are unequivocally committed to an end to what they describe as the "plutonium economy:" in other words, the scrapping of *not only the DM 5.2bn* Wackersdorf facility, due to be finished in 1994, but also the completed fast breeder project at Kalkar, close to the border with Holland.

The Government maintains that the 300 Mw breeder reactor at Kalkar *will be* hooked up to the national electricity grid at the start of 1987. But the Social Democratic government in the state of North Rhine-Westphalia — headed by Mr Johannes Rau, the party's candidate for Federal Chancellor next year, is using every legal means at its disposal to resist a start-up at Kalkar, which at a cost of DM 6.5bn has been one of the prestige projects of the German nuclear power industry.

In the face of the storm, the authorities are sticking doggedly to their insistence that West Germany will press on with its programme. "There is no need for a new energy policy after Chernobyl," says Mr Heinz *Riesenhuber*, the *Technology* Minister.

Officials concerned with nuclear energy agree; and they do not try to hide their irritation at what they believe to be irresponsible exaggeration of the potential dangers. But, they concede, the post-Chernobyl climate of opinion has made the problem immeasurably more difficult.

"We'll just have to wait until the panic has died down. Then things should be easier," one of them adds. He could prove *over-optimistic.*

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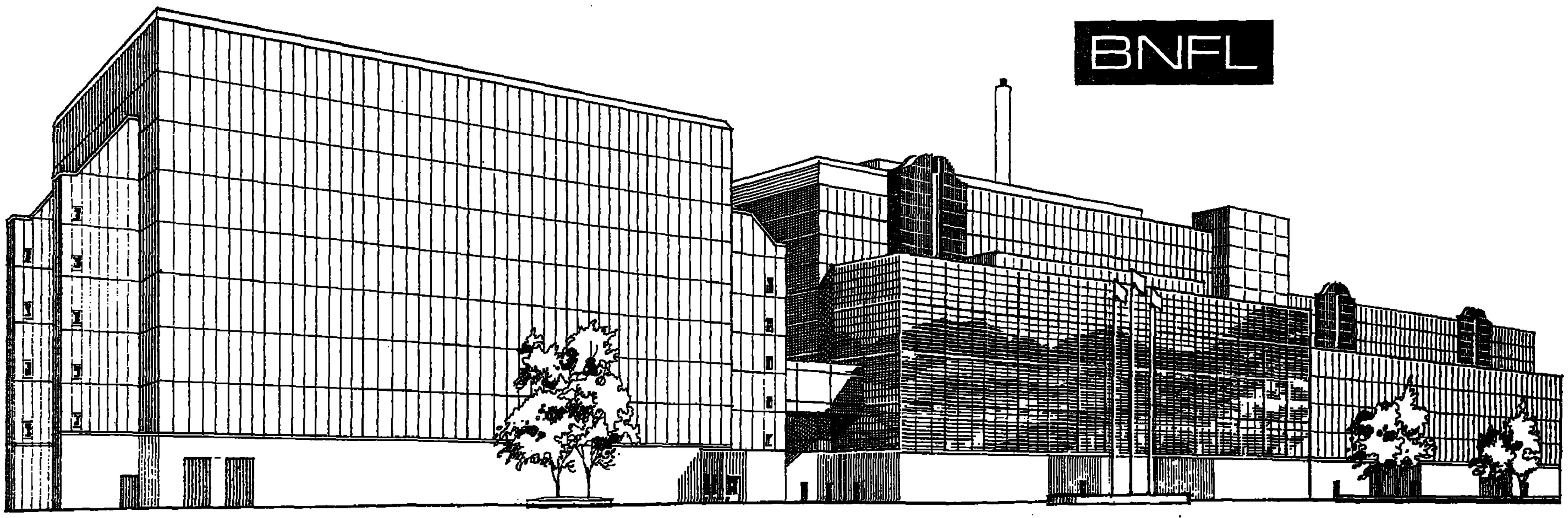

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Artist's impression of the completed Thermal Oxide Reprocessing Plant (THORP).

BNF 154

Complete review of energy policy

Scandinavia

OLLI VIRTANEN AND KEVIN DONE

THE FIGHT for Finland's fifth nuclear reactor was almost over. Most Finns were already converted to the idea that the country urgently needed more electricity and the cheapest way to get it was to commission more nuclear power. Even the staunchest opponents seemed ready to concede defeat.

But Chernobyl changed these views practically overnight. Now two thirds of the population oppose nuclear energy and the plans for the fifth reactor have been shelved.

The Soviet disaster not only put a lid on Finland's nuclear plans but it also forced Finns to rethink their entire energy policy well beyond the year 2000.

Finland is highly dependent on imported energy. Oil, coal and natural gas imports still account for well over half of the total energy consumption. As the country's hydro-electric resources were practically exhausted in the early 1970s there was little opposition when the four nuclear reactors were built between 1977 and 1980.

Two of them are 465 MW pressurised water reactors bought from the Soviet Union; the other two are boiling water reactors made by Asea-Atom of Sweden which generate 710 MW each. Nuclear energy now caters for 37 per cent of Finland's electricity consumption.

Opposition to nuclear power, as in the rest of Western Europe, grew during the early 1980s when the biggest consumers, the forest industry companies, began to voice concern over the threatening lack of power for their future investments.

But that changed gradually. Behind-the-scenes lobbying and public apathy made many opponents change their views and earlier this year a company was set up to build a fifth reactor. It is jointly operated by the owners of the present plants, Imatran Voima, the state-owned energy concern and Teollisuuden Voima, the industry's power company.

Anders Palmgren, president of the new company, Perusvoima, admits that it is now best to wait for a few months before making any decision. Nevertheless he is quick to add that the Chernobyl reactor was a totally different type from those in Finland.

According to experts, all the Finnish reactors have been built to the highest possible standards and international statistics back this claim. Aggregate availability of Finland's nuclear reactors was better than that of any country last year and Loviisa 1, one of the Russian reactors, was the number one of reactor of its type — allowing for its scheduled service break—last year.

Finns were actually responsible for building the plant and designed all the safety measures at Loviisa. As one engineer, who was building the plant, recalls: "The Russians kept asking us, 'Do you really need all that?' Now we know that we do."

In fact the Loviisa plant is now also a pride of the Russians with the word "Atomenergoexport" — or "Eastinghouse," as Americans have nicknamed it—emblazoned on the turbine-generators.

No matter how strong the arguments for nuclear power might be, adding to its share in Finland is very much an open question.

The key proponents, the Ministry for Trade and Industry, the power companies and Finland's two biggest political parties, Social Democrats and Conservatives, now want to take "time out" before the final decision. And that means no decision will be taken before the parliamentary elections in November.

Meanwhile, Imatran Voima has dusted off alternative plans to generate more energy in Finland. The company recently bought a large plot of land for a possible coal plant. Many observers now regard coal as a viable replacement for nuclear power. Sparsely-populated Finland does not suffer from environmental problems familiar to central European countries.

In Sweden, the Chernobyl disaster has rekindled the fierce nuclear debate that dominated Swedish politics for much of the late 1970s.

As a result of a referendum in 1980, Sweden became the first country in the world committed to an eventual phasing out of nuclear power. The Swedish parliament subsequently agreed that the existing programme of 12 reactors should be completed, but that the country should close down all its nuclear power stations by the year 2010.

During the last 12 months Swedish industry in particular had begun to wage a campaign to have the decision of the referendum overturned, on the grounds that the dearer electricity that would result from abandoning nuclear power would seriously undermine industry's international competitiveness.

However, the Chernobyl accident has inevitably stopped that campaign, just as the accident at the Three Mile Island plant in the US had a major influence on the result of the 1980 referendum.

According to an opinion poll taken in the wake of Chernobyl, as many as 60 per cent of Swedes would now vote against nuclear power if the country were to hold a new referendum. In a poll taken five years ago some 45 per cent were in favour and only 42 per cent against.

Sweden is currently one of the most nuclear-dependent countries in the world with nuclear energy accounting for 42 per cent of electricity generation last year. The last two of the country's 12 reactors were commissioned during 1985 and the share of nuclear power in electricity generation could approach 50 per cent this year.

No credible alternative to nuclear power has yet been put forward, and strong environmental lobbies already exist to oppose both an expansion of hydro-power and the increased use of coal for power generation.

In the wake of the Chernobyl accident Mr Ingvar Carlsson, the Swedish Prime Minister, has opened the possibility, however, that Sweden could consider an earlier date for closing down its nuclear reactors. The all-party energy commission has been given the task of studying the implications of the Chernobyl accident for the Swedish nuclear programme.

According to Mr Carlsson, the programme to phase out nuclear power could be brought forward if the commission's study reveals deficiencies in Swedish nuclear safety standards.

The government is coming under heavy pressure for action from the anti-nuclear lobby and the Communist and the environmentalist Centre Party. As a first priority, they seek the closure of the Barsebeck nuclear plant, which is located close to the densely-populated areas of Malmo in southern Sweden and the Danish capital of Copenhagen, as well as a reversal of the decision to *spend SKr 1.2bn on the replacement* of steam generators at the Ringhals Two reactor in south-west Sweden.

While the general nuclear debate reaches a new pitch, Sweden's nuclear industry continues to make progress in developing resources for coping with the waste produced by nuclear power. Only two days after the Chernobyl accident the country officially inaugurated its Clab interim nuclear waste storage site on Sweden's south-east Baltic coast.

Clab will be used to store highly radioactive nuclear waste from the country's 12 reactors for at least the next 40 years, until decisions have been taken on the location of a long-term storage facility.

Coal question delays expansion plans

Belgium

PAUL CHEESERIGHT

THE FINAL expansion phase of Belgium's ambitious plans for its nuclear industry are stalled—but not because of Chernobyl. It has been caught up in a complex situation related to the future of the ailing coal industry.

Surprisingly for a country second only to France in its dependence on nuclear energy, the Chernobyl disaster raised only a few ripples. The Government has promised parliament a report on the implications of Chernobyl and that should be ready by the summer recess.

A long-awaited decision on whether to build one more nuclear power station will certainly not be made before then, but the report is not seen in official circles as critical in what are expected to be lengthy discussions inside the coalition government.

Pressure has been building for the construction of a coal-fired power station as a partial means of securing the future of the coal mines in the politically and economically sensitive province of Limbourg.

The mines are running out of subsidy and the regional authorities, on whom the burden of financing the mines falls this year, have not the resources to meet the bills. If as an indirect means of bailing out the coal mines, a new coal-fired station is constructed, then the need for a new nuclear power plant diminishes.

Called N8 in local jargon, the new plant figures in a 10-year plan prepared by the electrical industry to run to 1995. Although the electrical utilities are private sector companies, they work closely with the Government and their plans pass through two advisory committees before final approval by the Cabinet.

The committees have done their work, but the government has stalled by seeking further reports on the coal-fired station proposal.

This in turn has implications for an agreement with France signed in 1984. This agreement in effect provided the framework for the last phase of the industry's expansion. It had two parts.

The first provided for Ebes, Intercom, Unerg and SPE, all Belgian utilities, to take a 25 *per cent stake in two new* French nuclear power stations, Chooz B1 and B2, each of which would have a capacity of 1,390 Mw. At the same time Belgian industrial companies like ACEC of Charleroi and Cockerill *Mechanical Industries of Liege* would have a share of the equipment contracts.

The second concerned N8, also with a 1,390 Mw capacity. In this Electricité de France would have a 50 per cent stake.

The plan was that Chooz B1 would come to production by 1991, while the other two would start producing sometime from 1995 onwards. Chooz B1 is going ahead, but because the Belgian government has delayed on N8, the French have not come through with the equipment contracts for Chooz B2.

Although the Belgian Government has accepted that N8 goes ahead in principle — that is implicit in the agreement — in practice it has stalled the plan by not settling either a site or a firm date for bringing it on load.

All three of these planned new stations have a larger *capacity than those from which* in the past Belgium has drawn its nuclear power.

Nuclear power first became available on an experimental basis from a plant at Mol, in the northern part of the country. *But from 1967 Belgium started* taking half the output of a French station at Chooz, just over the frontier in the Ardennes region.

The first Belgian commercial power stations came on load in 1975—Doel 1 and 2, near the Dutch frontier and Tihange 1, near Liege. Tihange 1 is half owned by Electricite de France. Since then two more plants have been added at Doel and two at Tihange. Doel 4 came into full service in July last year and Tihange 3 last September.

The effect of these developments has been to raise the role of nuclear power in Belgium's energy mix so that, in 1984, nuclear power accounted, for the first time, for more than half of primary energy production.

Renewed campaign to stop Kaiseraugst plant

Switzerland

WILLIAM DULLFORCE

ANTI-NUCLEAR reaction in Switzerland after the Chernobyl accident was relatively muted at first and the Swiss government signalled its intention to continue with the nuclear programme.

But the four main anti-nuclear environment groups have now decided to make another effort to stop Switzerland's much-delayed sixth nuclear power station at Kaiseraugst. They will *certainly now be able to* initiate a third national referendum on the nuclear issue.

Tenders for the construction of Kaiseraugst were submitted on May 15 and ATEL, the operating company *which took over responsibility* for the project on May 1, has set up a timetable under which building would start at the end of 1988, allowing the station to produce in the mid-1990s.

The government and parliament *endorsed a general construction permit* for Kaiseraugst in March 1985. The next step is for ATEL to secure a nuclear building permit.

It is unlikely that a third referendum can be brought about before 1991 but the anti-nuclear groups will try to mobilise public opinion—and possibly resume direct obstructing action—to prevent the political authorities from authorising the issue of the nuclear operating permit by the end of 1988, even if ATEL meets the conditions.

It should not be forgotten that 10,000 anti-nuclear demonstrators occupied the Kaiseraugst site as long ago as April 1975, bringing to a halt excavation work. There has been no construction work on the site since.

Chernobyl has produced a setback in public opinion for the Swiss nuclear power consortium although Mr Hans-Rudolf Lutz, ATEL's managing director, is convinced that the "good sense" of the Swiss will eventually prevail. They know that nuclear energy will be essential for their continuing prosperity, he argues, but acknowledges that efforts will have to be reinforced to reassure people that the technology installed in the Swiss plants is different from, and safer than, that used at Chernobyl.

Before Chernobyl, anti-nuclear sentiment was ebbing in Switzerland and environmentalists had been concentrating on pollution issues, in particular the threat to the forest from car exhausts and noxious fumes from industry.

However, in the first opinion poll taken after Chernobyl, 57 per cent said they were against continuing with the Kaiseraugst project. The environmentalist North-West Action (NWA) group mobilised 2,500 people for an anti-nuclear demonstration in Basle.

The two cantons of Basle, with a cluster of nuclear power stations on their doorstep, voted heavily anti-nuclear in the 1979 and 1984 referendums. The NWA returned to the attack last month with the slogan "Chernobyl is 11,000 km away, Kaiseraugst 10 km."

Anti-nuclear groups in Geneva are stirring again. The cantonal authorities had asked the Federal Council to seek an agreement with France on co-operation in the event of an accident to one of the French nuclear power stations close to the cantonal border, even before Le Canard Enchaine, the French satirical weekly, disclosed that a plant at Bugey had experienced a serious alarm in 1984.

The Socialist Party has already started campaigning for a halt to Kaiseraugst and the application of stricter security standards to the operating nuclear plants. It also wants more drastic measures to economise on energy.

The debate in parliament scheduled for next month may give a clearer idea of the line of attack the anti-nuclearists will follow. But the power companies are more afraid of what may happen in neighbouring West Germany. If militant environmentalists there succeed in stopping the German nuclear power programme, it would be very difficult for the Swiss to continue with theirs.

The Kaiseraugst group is doggedly pushing ahead towards obtaining the nuclear construction permit under its new timetable. It was reduced to 11 shareholders after the departure in January of Alusuisse, the Swiss aluminium company, and Electricite de France. Their exits were due to economic and technical appraisals and had been expected.

Following the Swiss authorities' stipulation that Kaiseraugst should be built with known and proven technology, the group asked for new tenders earlier this year. Three tenders had been submitted by May 15, one for a boiling water reactor from the Brown, Boveri-Getsco consortium and two from Kraftwerk-Union of West Germany which offered boiling water and pressurised water alternatives. Evaluation of the tenders will take the rest of this year.

The problem of nuclear waste disposal is not particular to Kaiseraugst: *it is in fact more* urgent for the existing stations but it has yet to be solved. Nagra, the company charged with the responsibility for finding depositories, submitted a report at the end of last year which is now being scrutinised by the authorities. It has three specific sites in view for low-level storage but so far none for high-level. Its work has been peppered with protests from cantons and communes.

The delay in building Kaiseraugst has prompted Swiss electricity companies to conclude contracts for the supply of electricity from France. Some 1,700 megawatts have been secured mostly under 10-year contracts, so that by 1990 France could be providing as much as 15 per cent of Switzerland's demand for electricity and filling the gap before Kaiseraugst comes on line.

Already with the entry into service of the Leibstadt station in December 1984, some 40 per cent of the electricity consumed in the confederation has a nuclear origin.

Problems of timing

Spain

DAVID WHITE

THE DISASTER at Chernobyl occurred at a particularly awkward moment for Spain's energy authorities.

It came just as they were beginning to consider reviving reactor-building plans, which were put on ice two years ago. The coincidence is all the more awkward because the project which is first in line for being relaunched is in the Western Extremadura region, the main focus of recent controversy over nuclear safety.

Work on two 930 Mw reactors at Valdecaballeros in Extremadura was already well advanced when the Socialist Government announced that it was stopping them along with three other reactors. Some $1bn had already been invested in the plant.

The cutbacks were in fulfilment of the Socialists' election pledge to scale down planned nuclear generating capacity in the early 1990s from 13,500 MW to 7,500 MW—more in line with the expected energy needs of a country badly hit by an industrial slowdown in the 1970s. The number of reactors in operation, under construction or on the drawing-board was cut from 18 (the ambitious target of the previous government's energy plan) to 10.

But the new administration acknowledged the possibility of changing its mind if the expected national electricity demand were to alter significantly.

Consumption of electricity rose by 4.7 per cent in 1984 and 3.5 per cent in 1985, rather more than expected. Since the second half of last year economic growth has picked up and forecasts for rising annual rates have been adjusted upwards in recent weeks, with this year's growth rate seen to be rising from 2.1 to 3 per cent.

In the light of this, the question of Valdecaballeros—two 975 Mw reactors using technology from General Electric of the US—is being reopened. Spain currently relies on nuclear energy for some 22 per cent of its electricity, and the proportion is due to rise towards the EEC average of about 30 per cent.

With the present reactors reaching their full capacity and with the new unit at Asco in the north-east connected to the network since last October, nuclear output rose 21.5 per cent last year. Output from oil-fired, coal-fired and gas-fired power stations rose by only 3.9 per cent and hydro-electricals production fell by 0.7 per cent.

Spain has not, however, escaped its share of anti-nuclear campaigning. Controversy has centred on the plant already in operation in Extremadura, at the twin-reactor Almaraz site. Previous conflicts with the Nuclear Safety Council over the provision of information about incidents at the site have led to fines on three occasions. Last year one reactor was stopped on the Safety Council's orders because of a faulty valve. The other reactor was halted recently, although for reasons ostensibly unconnected with the plant itself.

The Almaraz plant, a frequent target for demonstrations, has put the Socialists in the Extremadura regional government in a difficult position. Its head of public works was summarily sacked after a charge that the plant had been "functioning with faults and without fulfilling security requirements."

The plant's 930-Mw pressurised water reactors (PWR) which went on load in 1980 and 1983, were the first stage of Spain's second-generation nuclear programme.

The first generation was made up of three smaller units—a 160 Mw Westinghouse model PWR at Zorita in the central Guadalajara province, which *started operating in* 1969, a 460 Mw General Electric boiling-water reactor at Garona in the north and a 500 Mw gas-cooled graphite reactor, using technology from Framatome of France and part-owned by Electricité de France, at Vandellos in Catalonia.

At the time of the cutbacks, first announced in October 1983 although the sites affected were not named until April 1984, another 930 Mw PWR had started operating at Asco, also in Catalonia. Under the revised plan only two more were to enter service by 1990—a second unit at Vandellos, and one at Trillo, north-east of Madrid, being built in co-operation with Kraftwerk Union of West Germany.

A second 1,032 MW unit at Trillo was axed. In the end, if Valdecaballeros is reprieved, Trillo II may prove to be the only real victim of the cuts.

Slow pace dogged even further

Italy

JAMES BUXTON

ITALY'S nuclear industry was facing uncertain prospects even before the Chernobyl disaster. Now its future is even more cloudy.

The country's energy planners have long seen the advantages of nuclear power for a country which has very few indigenous energy resources. Even now, imported oil accounts for nearly 60 per cent of Italy's energy needs, *while in the 1970s* the proportion was in excess of 70 per cent.

Yet despite successive plans for large-scale development of nuclear power, Italy at present has only three functioning nuclear power stations, producing a total of 125Mw. Two of the three plants are small, and of these one is due to be phased out in 1992.

A new plant, consisting of two 1000Mw units, is being constructed at Montalto di Castro, about 70 miles north of Rome. It uses boiling water reactor technology, obtained under licence from General Electric of the US.

The current national energy plan calls for the construction of five more 2 x 1,000Mw plants, using pressurised water technology acquired under licence from Westinghouse. Formal decisions to proceed with finding sites were taken in 1983 for three of these plants, but so far the site of only one plant has been agreed. This is at Trino Vercellese on the River Po in Piedmont.

But even here the convention or agreement between the municipality of Trino and Enel, the National Electricity Authority, has not yet been signed. Enel began recently to do very preliminary site preparation work, but the municipality ordered it to stop for a "pause for reflection" shortly after Chernobyl.

As for the other two plants, no decision has yet been taken on the site of a plant to be erected in Lombardy, and matters are even less advanced in Apulia, in the south-east, where local opposition is stronger.

The basic reason for the failure of the nuclear programme to get under way is that central government has only limited scope for imposing its will on local authorities which object to nuclear power. In theory, the government can override the objections of local municipalities after a certain period. But in practice other considerations make this a questionable policy: it is reckoned to be better to get almost all the ducks in a row before going ahead.

For this reason it is relatively easy for municipalities to block the construction of nuclear power stations. They may do this out of genuine anti-nuclear fears, or because they believe that nuclear plants provide little long-term employment, or because they believe that the longer they hold out the more offsetting aid they will get from central government.

The difficulties of the last few years suggest that the anti-nuclear movement is rather stronger than had been thought when, at the beginning of the decade, the drive for more nuclear plants gained new impetus. Yet in April the Communist Party, by a narrow majority, reversed a previous position of opposition to nuclear energy.

All this threatens to change in the wake of Chernobyl. Italy was one of the countries in Western Europe more heavily affected by radio-activity and there was considerable public alarm as the sale of leaf vegetables was banned and it was forbidden to give fresh milk to children. A public opinion poll showed that 79 per cent of those asked were opposed to building new nuclear plants, while 33 per cent wanted the immediate closure of Italy's existing stations.

Two minor Left-wing parties, the Radical Party and Proletarian Democracy, are promoting a series of referendums on nuclear energy in collaboration with environmental groups. They need to obtain only 500,000 signatures in order to present the demand for the referendum to the constitutional court, which has to check the validity of the proposal.

If the referendums go ahead —each calls for the abrogation of different laws on nuclear energy—they would probably take place next year.

The major political parties are taking a more cautious line, notably the Christian Democrats and Republicans who are in the government. The Socialist Party, which is headed by Mr Bettino Craxi, the Prime Minister, has called for the premature closure of the Magnox plant at Latina south of Rome as a "significant gesture." The Communists are uncertain what attitude to take. But there is little doubt that nuclear energy is going through a difficult phase in Italy.

All this is bad news for Ansaldo, the state-controlled company which is Italy's major nuclear contractor. Ansaldo, based in Genoa, is building the Montalto di Castro plant, due to produce electricity in 1990, and for several years has been preparing itself for the planned new series of power plants.

It has been negotiating hard with Enel over the contract for the nuclear plant at Trino Vercellese, and Enel believes it has beaten it down from a price of about L2,400bn to about L1,600bn, although no contract has yet been signed. Ansaldo wanted to charge highly for the first plant of the new standard design, and ask successively lower prices for other plants. But Enel resisted this.

With the Italian nuclear programme in a state of uncertainty, Ansaldo's nuclear division would like to compensate with foreign orders. But here too it has been affected by the nuclear blight. It is engaged on only one overseas project: that at Cernavoda in Romania, where Ansaldo is supplying the engineering as well as plant and equipment for the non-nuclear part of the first two units of the five-unit Candu group.

Work started in 1981 and completion is scheduled for 1989. Recently it completed a joint venture with Novatome to build the Creys-Malville Super Phenix fast-breeder reactor, a project which is almost complete.

Hopes are still pinned on winning the contract to build the El-Dabaa nuclear plant in Egypt in consortium with Framatome of France. But that project too must be in doubt in the current economic and political climate in Egypt. Ansaldo is also bidding alone with Westinghouse for the contract to build a nuclear plant at Prevlaka in Yugoslavia.

THE MANAGEMENT PAGE

EDITED BY CHRISTOPHER LORENZ

Corporate health care

Why a time bomb is fizzing in the US

Louis Kleber highlights the hidden liability of retired employees

JOSEPH CALIFANO, now a director of the Chrysler Corporation and former US Secretary of Health, Education and Welfare, once described the cost of health care for the retired in the United States as a "time bomb." It is not just a figure of speech, for the financial liabilities connected with health care for the retired are truly enormous. The US Department of Labor estimates the obligation at $125bn. Many experts think that is too conservative. Well over 80 per cent of medium to large sized American employers fund some form of health care for retired employees, and it is common to include the spouse as well.

The issue is of obvious concern to companies in Europe and elsewhere with subsidiaries in America. The pages of financial journals are filled every day with stories of planned and completed acquisitions. Lloyds Bank bids for Standard Chartered Bank, AM International makes an offer for Harris Graphics, Bowthorpe Holdings acquires Monitor Products of California—and so it goes on. There have been more than 13,000 mergers and acquisitions in the US since 1980. Whether as a result of acquisition or, indeed, the direct establishment of a subsidiary in the US, any action that involves American employees may have an emerging health care wrinkle—a massive one.

What is the price tag? Some estimates place the unfunded liabilities in individual plans from four to 50 times the amount employers are now spending annually on health benefits. If the unfunded liabilities for health care for their retired employees and for life insurance appeared on the corporate balance sheet, many companies would have a negative net worth.

In an effort to improve the financial bottom line, Bethlehem Steel Corporation initiated a $24 a month contribution from 18,000 retired employees toward health care for which the company had been paying the full cost. A US District Court said "no," and ordered the benefits to be re-instated when white-collar retired filed a class action suit against the company, arguing that nothing had been said in booklets about reducing or cancelling benefits.

The older industries, like Bethlehem Steel, have been particularly hard hit as the ratio of employees to retired has undergone dramatic change. In the early 1950s, there were about 15 employees to one retired. By 1985, that ratio had dropped to about four employees to one retired.

Bad news indeed, in light of the fact that the over 65s constitute 12 per cent of the population, but 30 per cent of the health care bill, and their pace of spending has been nearly double that of the overall population in the last 10 years. To make matters worse, the Federal programme of Medicare for the 65 and over population covers only 45 per cent of the health care bill, and it is government policy increasingly to shift the burden to employers.

Robert P. Borsody, a partner in the national health care law firm of Epstein Becker Borsody & Green, says: "The storm clouds have arrived. only the most naive senior executive would pretend that health care for the retired is not a major financial and employee relations issue."

A landmark case appears to *be developing in a $250m class* action suit by retired employees against American General Corporation of Houston, Texas. In 1982, American General acquired the smaller NLT Corporation of Nashville, Tennessee, a company which had continued health care for its retired members.

American General decided to cut back on medical costs by requiring $16 to $32 a month as a contribution from its retired employees. One complained: "People worked for years and paid their dues and expected these benefits because they were promised."

Each side has attracted support. The American Association of Retired Persons, representing 20m members, is openly supporting the retired, *while the Washington Business* Group, representing over 150 corporations, is on the side of American General. An initial court ruling favoured the retired, but the case is heading for a US Circuit Court of Appeals.

Even a company undergoing bankruptcy reorganisation is not immune. When the White Farm Equipment Company tried to require retired contributions under a previously non-contributory plan, a US district court ruled that a lifetime obligation *to the retired had been assumed* and could not be withdrawn, even though the employer had communicated its policy that such benefits could be changed.

The shocking element in this whole scenario is that senior management is largely unaware of what is happening in the courts, of the magnitude of the problem and of the fact that they do not have carte blanche to do as they wish with existing programmes. The Washington Business Group recently surveyed 200 companies and found that 81 per cent thought they had the right to amend or terminate plans. Not so. Rick Lee, the group's vice president-public policy, noted: "You can have only so many court precedents before you have an iron-clad rule."

Compounding the employers' dilemma is a recent ruling, No. 81, by the Financial Accounting Standards Board. It requires employers to disclose the dollar liability and other details about post-retirement health care and life insurance benefits in the *footnotes to financial statements.* This is strong medicine, for less than 1 per cent of medium to large size companies are pre-funding these benefits. Who wants to see what could be hundreds of millions of dollars spelt out as a liability in the *annual report? IBM, Northrop* and RCA are among the few employers with some type of prefunding arrangements.

Gerald Goldstein, president of Advance Retirement Systems, an international firm of consultants, put it this way: "Given the current interest in Europe and the Far East in acquiring US firms, it is imperative for top management to have at hand both studies and evaluation of existing and emerging health care liability for the retired. When this is done early on, it can avoid heavy time and expense in acquisitions that could be avoided in pursuing a 'bad deal'."

Ramon Martin-Busutil, managing director of Schweppes Europe, agrees, noting that the problem is exacerbated on the Continent, particularly in France, because of the scarcity of actuaries equipped to measure liabilities and determine a course of action. Goldstein offers an idea of that liability: "Assume annual medical care cost for the average employee who retires in 1986 is $4,000. Assume that cost rises a modest 3 per cent each year. The present value of that liability is 20 times, or $80,0000, and more than 90 per cent of the companies providing such care also cover the spouse."

Some time ago, the author participated directly in the acquisition process of three major US firms by a very large British company. The latter signed the purchase agreement without having determined the unfunded accrued liabilities of the pension plans at the American firms. Luckily, the plans were adequately funded. What if one or more of these firms, in today's environment, also had a health care commitment for its retired employees that had not been reflected in the financial statements or otherwise overlooked?

Questions such as these should be addressed: have our communications with employees been examined to determine if there is a firm or implied commitment to health care for the retired? Has legal counsel reviewed formal employee benefits plan documents with the same objective? Has an actuarial determination been made covering the current and emerging liability? Do we have a well thought-out corporate philosophy about this issue? All of these questions are pertinent; and there are more.

Magicians are fond of saying: "Now you see it, now you don't!" Senior management and corporate stockholders can do without the surprise of a reverse on that statement: "You didn't see it, now you do!" The curtain is not likely to fall in this area for a long time. The show will go on and on, with the price of admission paid every day.

A British international business consultant, Ronald Hancock, has experience on both sides of the Atlantic. He sums it up: *"Retiree health care* problems in the US are great indeed, but techniques to solve them exist. The first step is management awareness; the solutions follow."

Louis Kleber is vice president of Advance Retirement Systems, California.

Information technology

Redressing skill shortages

Alan Pike reports on an industry-funded academic venture

A UNIVERSITY of Communi*cations.* The phrase was coined by Kenneth Baker when, as Minister for Information Technology, he received plans for the development of a novel British IT Institute at Milton Keynes.

As the newly-arrived Secretary of State for Education and Science, Baker will take pleasure in the fact that the IT Institute is preparing to admit its first students this autumn. And it is likely to be an additional source of pleasure for him that his department is not financing the project.

British Aerospace this month became the latest in a group of major UK companies to put substantial amounts of cash into the institute in conjunction with Cranfield Institute of Technology. Other contributors are British Gas, British Petroleum, British Telecom, BICC, Cable and Wireless and the Longman Group.

Alongside the cash investors another, larger, group of companies will be contributing hardware or software to equip the *institute. These* include IBM, Digital Equipment, Rank Xerox, Inmos, GEC Software and Hewlett-Packard.

As befits an institution which is being financed by industry, the IT Institute will run on deliberately business-like lines. Its ownership will be based upon a share structure. It will have a board of directors and a managing director rather than a conventional academic framework. The staff, intended to grow to 150 over five years, will be employed on industrial *terms and conditions of service* — it is even proposed that pay should be performance-related.

Performance is certainly important. Skill shortages are a widely-acknowledged constraint on Britain's ability to take full advantage of the explosion *in information* technology opportunities. A report prepared for the Government last month by the Institute of Manpower Studies estimates that the market for IT products and services will grow by at least 10 per cent a year between *now* and *1990* — but warns that skill shortages will continue throughout this period.

The IMS report followed an investigation into information technology skill shortages which was completed last year and was chaired by John Butcher, junior Industry Minister. *One of its conclusions* was that a new partnership must be formed between industry and the education system, and the IT Institute is a demonstration of these words being translated into action.

Nearly £4m has been contributed by industry to set up the institute. When it is fully operational, it will provide an annual 4,000 short courses lasting 6 to 12 months, some of which are for graduates in other disciplines wanting to become information technologists, plus places for 200 postgraduates and a small number of undergraduates. Many courses will be tailor-made to meet the needs of particular employers.

Running costs will be high. One of the guiding principles of the IT Institute is that students must have access to the most advanced equipment, and in the information technology field nothing remains the most advanced for very long. About £2m a year will be required to maintain a regular equipment updating programme. *One of the criticisms*

Shareholder

which some industrialists behind the Milton Keynes initiative make of information technology teaching at other UK universities and colleges is that equipment is often out of date, meaning that supposedly qualified recruits cannot be put to work until they have been retrained.

Cranficid Institute of Technology is entering the project as one of the shareholders, although it will be for the IT Institute board to decide how to run the venture.

"The difficulty with industrial support for higher education in Britain is that organisations usually make endowments on a once-and-for-all basis," says Sir Henry Chilver, vice-chancellor of Cranfield. "Getting continuous investment is one of the biggest problems facing higher education.

"The teaching of information technology subjects, with the short life of equipment, requires continuous investment and that is why we need to run the institute as a business. Proceeds will be ploughed back into the business to provide new resources."

Sir Henry does not pretend that the *IT* Institute, although an important initiative, will on *its own overcome the information* technology skills shortage which Britain faces. "There is room for many other such institutes. What I believe we are seeing is the shape of things to come — the first of a new generation of high-technology teaching institutions working in close collaboration with industry."

Cranfield is no newcomer to collaboration with industry. It currently has links with more than 1,000 industrial organisations, and Cranfield itself has a highly business-like structure with each department paying its own staff, renting campus space, and being expected to be financially viable. About 15 per cent of Cranfield's income is generated overseas with, in many cases, staff going to the customer-nation rather than bringing students to Britain.

The IT Institute is therefore not simply a good-hearted gesture by the Cranfield authorities to help tackle a national skill shortage problem. It is central to the institution's own strategy to develop and consolidate its financial and academic base through industrial links. Another project, the CIM Institute—an independent centre for computer-integrated manufacture—was established earlier this year and a biotechnology institute on similar lines to the IT one is under consideration.

These developments reflect Sir Henry's view that higher education is an "enormous growth industry" in which British institutions can win a *handsome share provided they* organise themselves properly.

"This means structuring institutions in a way which gives them the best chances of success, as we have tried to do with the IT Institute. The teaching of history and information *technology* are *different* businesses in which you cannot apply the same norms. If we try to, we may be inhibiting the success of both.

"Higher education has to be world-knowledgeable. We at Cranfield relate to all the leading companies in the world in our fields of interest. Cosy relationships between universities and their local industries are probably not good for any of them, because they can divert attention from some of the most major international developments."

Contracts and Tenders

Yemen Arab Republic

Yemen General Electricity Corporation
Power IV Electrification Project
Grid connections of small towns and villages

The Government of the Yemen Arab Republic expects to receive loans from several sources for development of electrical distribution systems for rural areas, comprising (quantities estimated):
—delivery and installation of 33 kV (170 km) and 11 kV (330 km) overhead lines, 11 kV underground cables (15 km), 9 x 33/11 kV and 250 x 11/0.4 kV transformer substations, 30 x 11/0.4 kV substation improvement, L.V. lines (360 km), consumer and house connections (18,000),
—dismantling and rehabilitation of existing overhead lines and transformer stations,
—delivery and installation of two (three) complete diesel power plants 2 x 500 kW, each,
—execution of all necessary civil work such as buildings, steel structures, foundations, etc.,
—delivery and installation of all related auxiliary systems, control and protection equipment,
—delivery of spare parts, tools,
—training

The Financing Institutions involved are the IDA/Worldbank, the Arab Fund for Economic and Social Development, the Islamic Development Bank and the Swedish Agency for International Technical and Economical Cooperation (BITS).

It is intended to apply the following loans separately to certain geographical areas for the above-mentioned material and works:

1. IDA/Worldbank loan.
2. The Arab Fund for Economic and Social Development loan and Islamic Development Bank.

Potential manufacturers, suppliers and contractors who wish to participate in bidding for the above work are requested to apply in writing to be placed on the list of eligible bidders to receive notification of the availability of bid documents.

Such firms must give details of proven experience in the manufacture and construction of such projects and the whole works, on a turn-key basis.

Prospective bidders have to submit the following information/documentation as a minimum:

1. Certified documents of the bidder's financial status, current assets or working capital, and names of banks of reference.
2. Number of permanent professional employees of bidder's firm.
3. Organization, management and experience of project personnel.
4. Extent of projects, implemented by the bidder, in US$.
5. Range of bidder's products and services in general.
6. Range of products and services related to this project.
7. References of similar projects indicating type, size and date of the projects.
8. References (separately) of any activities in the Yemen Arab Republic.
9. Maintenance facilities in the Yemen Arab Republic or nearby countries.
10. Training facilities for operation and maintenance personnel in the manufacturer's country.
11. Selected firm will be invited to submit a formal tender but, irrespective of successful pre-qualification, the YGEC will reserve the right to accept or reject any or all tender(s) and will not be bound to accept the lowest offer.

Application should be sent by airmail to arrive not later than 15th July, 1986, addressed to

The Managing Director
YEMEN GENERAL ELECTRICITY CORPORATION
P.O. Box 178
Sana'a
YEMEN ARAB REPUBLIC

Dar Al Handasah Consultants
(Shair & Partners)

REPUBLICA POPULAR DE ANGOLA

PUBLIC INVITATION TO TENDER FOR THE TURN-KEY CONSTRUCTION AND THREE YEAR MANAGEMENT AGENCY OF A CEMENT PLANT

1. The Government of Angola's cement-making enterprise of Angola-Cimangola UEM, 42 - 2nd Floor, Avenida 4 de Fevereiro, Luanda, People's Republic of Angola, PO Box 2532, telephone Luanda 71196/7, telex 3142 CIMENTO AN, invites organisations who are experienced in the design, construction and management of cement manufacturing plants to tender pursuant to their Conditions for Tender for the Turn-key Construction of a 2300 tonnes per day dry process kiln, known as Kiln 4, and ancillary works and the management of their whole plant of approximately 4300 tpd at Luanda under a 3 year Agency Contract.
2. Invitations to tender are restricted to organisations whose country is a member state of the African Development Bank's group of countries which currently include all fifty independent African states, Austria, Belgium, Brazil, Canada, People's Republic of China, Denmark, Finland, France, Federal Republic of Germany, India, Italy, Japan, Korea, Kuwait, Netherlands, Norway, Portugal, Saudi Arabia, Spain, Sweden, Switzerland, United Kingdom of Great Britain, United States of America and Yugoslavia.
3. The location of the plant is some 12 kilometres to the north east of the city of Luanda near Pontas das Lagostas and is directly adjacent to the natural deposits of the main raw materials of limestone, clay and sand, but the gypsum deposits are situated 80 kilometres northwards.
4. The tender documents create an integrated bid comprising:
   (a) The provision of management services to act as the agent of Cimangola in the taking over, management and operation of the total plant after the expiry of the existing management agency in some four years hence subsequent to the turn-key completion of Kiln 4, and
   (b) The design, construction, testing, commissioning, completion and maintenance of Kiln 4 and its ancillary works, utilising as much as is economically possible the components of the existing 1500 tpd wet process mechanical and electrical plant of Kiln 4 delivered to the site in 1975 but not assembled or erected, to produce after its rehabilitation and conversion to the dry process, 2300 tpd with guarantees in respect of production and energy consumption and
   (c) The provision of loan capital finance of not less than 30 per cent of the value of the Tender Sum for the Turn-key Contract, supported by the guarantee of the Banco Nacional de Angola with respect to capital and interest.
   (d) Elaboration and the submission for evaluation of a study on future prospects for the exportation and selling of Kiln 4 production on the exterior market.
5. The time for completion of the Turn-key Contract will be 36 months.
6. The specific legal form of the Contract will be governed by the laws of the Republica Popular de Angola.
7. The date for collection of Tender and Contract Documents, upon evidence of having paid the sum of US$ 2000 as a non-refundable payment, is 16 June 1986.
8. The location for the collection of the Conditions for Tender and the Tender and Contract Documents is Dar Al-Handasah Consultants, (Shair and Partners), 91, New Cavendish Street, London, W1, United Kingdom, Tel: 01-637-8622, Telex: 27187 DARSAHG.
9. The non-refundable payment should be made to Dar Al-Handasah Consultants (Shair and Partners).
10. The Tenders are to be submitted to arrive at the offices of Dar Al-Handasah Consultants (Shair and Partners) at 91, New Cavendish Street, London W1, United Kingdom not later than 12 noon local time on 17 October 1986.

Cimangola UEM Luanda Angola   Project Reference An8136/1

ANNOUNCEMENT NO. 7/86

Dubai Municipality invites pre-qualification submissions from suitably qualified and experienced Consultants, for the Study of Toxic and Hazardous Substances in the Emirate of Dubai.

Submissions should particularly mention experience in the Middle East and other sub-tropical regions and the curricula vitae of the staff to be employed in the study must be given.

If the successful Consultant is not already registered in Dubai he will be expected to set up an Office there for the duration of the Contract.

The application must be submitted in a plain envelope or package closed and sealed with red wax, without the identity of the applicant, and shall be addressed to:

DIRECTOR
DUBAI MUNICIPALITY
P.O. BOX: 67, DUBAI, U.A.E.

The envelopes or packages shall also be endorsed as follows:

ANNOUNCEMENT NO. 7/86
STUDY OF TOXIC AND HAZARDOUS SUBSTANCES IN THE EMIRATE OF DUBAI

and deliver to the Office of the Solid Waste Manager, Dubai Municipality by 1200 noon on 28/6/1986. Any submission received after that date will not be accepted.

Dubai Municipality reserves the right to accept or refuse any application without stating the reasons.

Director
DUBAI MUNICIPALITY

86103

NATIONAL PROVIDENT FUND (OF NEW ZEALAND)

STUDY OF INFORMATION PROCESSING SYSTEMS AND SERVICES: REGISTRATION OF INTEREST

Applications are invited from suitably qualified firms to carry out a study leading to the development and costing of a strategic plan covering the information systems and services for the National Provident Fund (NPF), into the 1990s. The fund is responsible for the management of superannuation schemes, their investments, and a range of other financial intermediation functions.

The objectives of the study are:
— To determine the information and data processing requirements of the NPF within both head office and local offices over the next five to ten years.
— To review the existing systems and recommend any improvements which could be put in place immediately.
— To consider the technological options available and the probable cost of providing an on-line integrated system (covering information collection, entry, processing, analysis, storage, retrieval, output, communication and dispatch) and levels of service for all user groups and clients.
— To recommend an overall strategy and to develop, and cost a prioritised and phased plan (including staffing and training requirements), for providing and managing efficient and cost effective processing and information systems and associated services, into the 1990s.

In replying, applicants must demonstrate expertise in this type of study — particularly by reference to previous similar projects in the area of the NPF's responsibilities.

The ability to complete the study according to a precise timescale will be a major consideration. It is expected the study will commence towards the end of September 1986, and that only firms able to meet this start date will apply.

Applicants registering interest must supply resumes of the personnel who would be assigned to the project.

A shortlist of suitable, prospective tenderers will be selected from those responding to this invitation to register their interest. It should be noted that this invitation is preparatory o the issue of detailed tender requirements, and that tenders will be sent only to those firms shortlisted.

Registrations of interest must reach:
Mr M B Hyndman
NATIONAL PROVIDENT FUND
1 The Terrace, *Private Bag, Wellington, New Zealand - Telex: NZ31199*
by 23 June 1986

Further information relating to this study may be obtained from:
Mr M Hyndman or The NPF Information Systems Development Team
Phone: 64 4 722-733, Extn 623 or 719

Company Notices

A copy of this advertisement and of the prospectus referred to in it have been delivered to the Registrar of Companies for registration.

GENERALE
SOCIETE GENERALE DE BELGIQUE
GENERALE MAATSCHAPPIJ VAN BELGIË

SOCIETE ANONYME - REGISTERED OFFICE: RUE ROYALE 30, 1000 BRUSSELS
BRUSSELS C.R. No. 17487 - V.A.T. No. 403.203.264

22th MAY TO 5th JUNE 1986

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ON THE BASIS OF
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APPLICATION MAY BE MADE THROUGH ANY OF THE FOLLOWING FROM WHOM COPIES OF THE NEW ISSUE PROSPECTUS MAY BE OBTAINED

IN BELGIUM:
- GENERALE DE BANQUE
- BANQUE BELGO-ZAIROISE (BELGOLAISE)
- BANQUE BRUXELLES LAMBERT
- KREDIETBANK
- BANQUE PARIBAS BELGIQUE
- BANQUE DEGROOF
- BANQUE NAGELMACKERS

IN LUXEMBOURG:
- BANQUE GENERALE DU LUXEMBOURG

IN FRANCE:
- GENERALE DE BANQUE BELGE (FRANCE)
- SOCIETE GENERALE

IN GREAT BRITAIN
- BANQUE BELGE LIMITED

IN SWITZERLAND:
- CREDIT SUISSE
- SWISS BANK CORPORATION
- UNION BANK OF SWITZERLAND

APPLICATION MAY ALSO BE MADE TO THE BANKS LISTED ABOVE THROUGH THE INTERMEDIARY OF OTHER FINANCIAL INSTITUTIONS.

SUBSCRIPTION RIGHTS REPRESENTED BY COUPON No 18 DETACHED FROM THE EXISTING SHARE CERTIFICATES WILL BE QUOTED ON THE BRUSSELS • ANTWERP • GHENT • PARIS • LUXEMBOURG STOCK EXCHANGES.

APPLICATION HAS BEEN MADE FOR AN OFFICIAL LISTING FOR THE NEW SHARES ON THE STOCK EXCHANGES MENTIONED ABOVE AND IN SWITZERLAND.

THE NOTICE REQUIRED PURSUANT TO THE COORDINATED LAWS ON COMMERCIAL COMPANIES HAS BEEN DEPOSITED AT THE REGISTRY OF THE BRUSSELS COMMERCIAL COURT ON MAY 15 1986.

Repeat Notice of Redemption

Province of Nova Scotia
U.S. $25,000,000
14½ per cent. Debentures due 1988

NOTICE IS HEREBY GIVEN that pursuant to the provisions of the above-described Debentures (the "Debentures"), Province of Nova Scotia has elected to redeem all of the outstanding Debentures on 30th June, 1986 at the redemption price of 100½ per cent. of the principal amount thereof, together with accrued interest to 30th June, 1986.

On 30th June, 1986 the Debentures shall become due and payable. Debentures should be presented for payment together with all unmatured coupons, failing which the amount of the missing unmatured coupons will be deducted from the sum due for payment. Payments will be made in United States dollars at any of the offices listed below.

Coupons due on or before 30th June, 1986 should be detached and collected in the usual manner.

On and after 30th June, 1986, the date fixed for redemption, interest on the Debentures will cease to accrue.

Province of Nova Scotia

Dated: 31st May, 1986

By: Union Bank of Switzerland, Principal Paying Agent

Union Bank of Switzerland
Bahnhofstrasse 45
CH-8021 Zurich
Switzerland

The Bank of Nova Scotia Trust Company of New York
67 Wall Street
New York, N.Y. 10005

Union de Banques Suisses (Luxembourg) S.A.
36-38 Grand 'Rue
B.P. 134 L-2011 Luxembourg

The Bank of Nova Scotia
Scotia House
33 Finsbury Square
London EC2A 1BB

BRASCAN LIMITED Class "C"

International Depositary Receipt (IDR)
issued by
Morgan Guaranty Trust Company of New York
Brussels Office

A distribution of Can$0.20 per share, less any applicable taxes and fees will be payable on or after June 7, 1986 upon presentation of Coupon No. 39 at any of the following offices of Morgan Guaranty Trust Company of New York:

— New York, 30, West Broadway
— Brussels, 35, Avenue des Arts
— London, 1 Angel Court
— Paris, 14, Place Vendôme
— Frankfurt, 46, Mainzer Landstrasse
— Zurich, 38, Stockerstrasse

and Banque Générale du Luxembourg, 43 rue Aldringen, Luxembourg

CREDIT LYONNAIS
U.S.$300,000,000 Floating Rate Notes due 1994
NOTICE OF EARLY REDEMPTION

Notice is hereby given to the holders of the above-mentioned Notes that Crédit Lyonnais will proceed to the early redemption of the total of the outstanding Floating Rate Notes due 1994, at their principal amount on the next interest payment date falling on July 8, 1986.

Interest accruing on the outstanding Floating Rate Notes will cease as of that same date.

BANQUE INTERNATIONALE A LUXEMBOURG
Société Anonyme
Fiscal Agent

Luxembourg
June 2, 1986

Personal

MEETING
£ 65.98
(Variation available on request)

Canadian Pacific's luxury German hotels offer new special budget meeting package – £ 65,98 per person, per day including accommodation, breakfast, lunch or dinner, conference room, coffee and more. For full details call 01049/69/77 07 21 Ext. 22 88.*

Canadian Pacific Hotels
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Art Galleries

ANDREW WYLD GALLERY, 17 Clifford Street, London W1. THE WATER-COLOURS OF SAMUEL JACKSON (1794-1869). A Loan Exhibition from The City of Bristol Art Gallery. 9.30-6.00 Mon.-Fri., until 18 June. Admission Free.

LEGER, 13 Old Bond Street. ENGLISH PICTURES FOR THE COUNTRY HOUSE. Mon. to Fri., 9.30-5.30.

OMELL GALLERIES 22 Bury Street, SW1 Tel: 01-839 4274. EXHIBITION OF MARINE PAINTINGS 2nd June-23rd June. Mon-Fri 10-5.30. Sat 10-1.

Clubs

EVE has outlived the others because of a policy of fair play and value for money. Supper from 10-3.30 am. Disco and top musicians, glamorous hostesses, exciting floorshows. 189, Regent St., W1. 01-734 0557.

ENGELS-HOLLANDSE BELEGGINGS TRUST N.V.
(English and Dutch Investment Trust)
Established in Amsterdam
PARTICIPATION CERTIFICATES
(Issued by Royal Exchange Assurance)

NOTICE IS HEREBY GIVEN that a gross dividend on the Participation Certificates of fls.4.70 (four florins and seventy cents) will be payable in Sterling on or after 27th May 1986 against presentation of coupon no. 36.

The dividend will be payable as follows, subject to the provision of the appropriate Netherlands Tax affidavit where necessary.

To Certificate Holders who are subject to United Kingdom Income Tax, less 15 per cent Netherlands Withholding Tax, and United Kingdom Income Tax at 14 per cent on the gross dividend.

To residents of other countries with which The Netherlands have concluded tax agreements, under deduction of 15 per cent Netherlands Withholding Tax.

To residents of all other countries, less 25 per cent Netherlands Withholding Tax.

Certificate Holders resident outside the United Kingdom will receive payment less United Kingdom Income Tax at the rate of 29 per cent of the net amount unless the coupons are accompanied by a United Kingdom Affidavit of non-residence. The aforementioned rates of tax apply only in respect of coupons presented for payment up to and including 28th November 1986. Thereafter Netherlands Withholding Tax will be deducted at the rate of 25 per cent and the United Kingdom Income Tax, where applicable, at the rate of 29 per cent from the net Sterling amount.

For the period of 27th May 1986 to 26th November 1986 the dividend will be paid in Sterling at the rate of exchange ruling on the day of presentation of the coupons. Coupons presented thereafter will be paid in Sterling at the rate of exchange ruling on the 27th day of November 1986.

To obtain payment, coupons no. 36 must be presented at the office of Hill Samuel & Co. Limited, 45 Beech Street, London EC2P 2LX. Coupons must be listed in numerical order on special forms obtainable from Hill Samuel & Co. Limited, and must be left three clear days for examination.

Copies are available on request to Hill Samuel & Co. Limited at the above address of the present Conditions relating to the Participation Certificates which Conditions replace those printed on the back of the existing Participation Certificates.

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Royal Exchange
London EC3R 8HN

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C. ITOH AND CO., LTD.

IMPORTANT NOTICE

Notice to holders of Bearer Depositary Receipts ("BDRs") issued by Hambros Bank Limited ("Hambros") in connection with the capitalisation issue of 1 new share of Yen 50 each of C. Itoh & Co Ltd ("the Company") for every 10 shares held on the record date of 31st March 1986.

The new shares will rank for all dividends paid in respect of period commencing on and after 1st April 1986. Application will be made to the Luxembourg Stock Exchange for quotation of the new BDRs resulting from this capitalisation issue. BDRs on the Luxembourg Stock Exchange were listed ex-capitalisation issue on 27th March 1986.

Entitlement to the new BDRs should be claimed by lodging Coupon No. 45 at the Stock Counter of Hambros Bank Limited, 41 Bishopsgate, London EC2P 2AA or at Banque Internationale a Luxembourg SA, 2 Boulevard Royal, Luxembourg during normal business hours on and after the date of this advertisement. Coupons must be lodged on the appropriate listing form, which may be obtained from the above addresses.

Against lodgement of the coupons Hambros will issue receipts and these in turn will be exchanged for BDR Certificates cum Coupon No. 46 within five working days.

Under the current Japanese Commercial Code the minimum BDR Certificate issuable is 100 Depositary units (representing 1,000 shares of Yen 50 each). Any entitlements to lesser amounts will be satisfied in due course by the distribution of the proceeds of the sale of the underlying shares of Yen 50 each. Amounts of less than £1.00 or the Yen equivalent will not be distributed.

HAMBROS BANK LIMITED

2nd June, 1986

Viking Resources International N.V.
Curaçao, Netherlands Antilles

Notice of Annual General Meeting of Shareholders

Notice is hereby given that an Annual General Meeting of Shareholders of Viking Resources International N.V. has been called by the Manager, Caribbean Management Company.

The Meeting will take place at John B. Gorsiraweg 6, Willemstad, Curaçao, Netherlands Antilles on 25th June, 1986 at 10.00 a.m.

The agenda may be obtained from the offices of the Company at John B. Gorsiraweg 6, Willemstad, Curaçao or from the Paying Agent mentioned hereunder.

Shareholders will be admitted to the meeting on presentation of their certificates or of vouchers, which may be obtained from the Paying Agent against delivery of certificates on or before 18th June, 1986.

Caribbean Management Company

Willemstad, Curaçao,
2nd June, 1986.

Paying Agent:
Pierson, Heldring & Pierson N.V
Herengracht 214,
1016 BS Amsterdam.

TRAFALGAR FUND
société anonyme
Registered Office: LUXEMBOURG, 14 rue Aldringen
Commercial Register: Section B No. 8 202

NOTICE OF ANNUAL GENERAL MEETING OF SHAREHOLDERS

The annual general meeting of shareholders of TRAFALGAR FUND, S.A., will be held at its registered office, 14 rue Aldringen, Luxembourg, on June 10th 1986 at 15.00 o'clock p.m. for the purpose of considering and voting upon the following matters:

(1) To hear and accept the reports of:
  (a) the directors
  (b) the statutory auditor
(2) To approve the balance sheet and the profit and loss account as at February 28th, 1986
(3) Allocation of net profit
(4) To discharge the directors and the auditor with respect to their performance of duties during the year ended February 28th, 1986
(5) To elect the directors to serve until the next annual general meeting of shareholders
(6) To elect the auditor to serve until the next annual general meeting of shareholders
(7) Any other business

In order to take part at the statutory meeting of June 10th, 1986, the owners of bearer shares will have to deposit their shares five business days before the meeting at the registered office of the Fund, 14 rue Aldringen, Luxembourg, or with one of the following Banks:
—Banque Générale du Luxembourg, S.A., 14 rue Aldringen, Luxembourg
—J. Henry Schroder Wagg & Co Limited, 120 Cheapside, London EC2V 6DS

The Board of Directors

ENGELS-HOLLANDSE BELEGGINGS TRUST N.V.
(English and Dutch Investment Trust)
Established in Amsterdam

8% FIRST CUMULATIVE PREFERENCE SHARES
8% SECOND PREFERENCE SHARES
ORDINARY SHARES

NOTICE IS HEREBY GIVEN that PAYMENT on the following DIVIDENDS having been duly authorised, the relative coupons may be presented at the Offices of Hollandse Koopmansbank N.V., Keizersgracht 674, 1017 ET Amsterdam, for PAYMENT on or after 27th May 1986.

8 per cent First Cumulative Preference Shares
Coupon No. 110,
at the rate of fls.80.—
8 per cent Second Preference Shares
Coupon No. 110,
at the rate of fls.60.—

Ordinary Shares—at the Rate of fls.4.70 25% Dutch Dividend Tax will be deducted. Residents of the United Kingdom and other countries with which The Netherlands have concluded a Tax agreement are advised to consult their bankers in order to obtain their dividends free or partly free of Dutch Dividend Tax. Holders of ordinary shares registered with the company will receive the dividend at the rate of fls.4.70 in the way as indicated by them. Holders of CF Shares will receive their dividend via the Custodians connected to the CF System.

Coupons forwarded from the United Kingdom will only be accepted if accompanied by the usual declarations required in accordance with the regulations in force in The Netherlands.

By order of the Board,
The Management,
Hollandse Koopmansbank N.V.

KEIZERSGRACHT 674
1017 ET AMSTERDAM
May 27th 1986

REPUBLIC OF INDONESIA
US$200,000,000
Floating Rate Notes due 1992

In accordance with the provisions of the Notes, notice is hereby given that the rate of interest for the period from 30th May 1986 to 28th November 1986 has been fixed at 7.3125 per cent per annum.

On 28th November 1986 interest of US$369.69 per US$10,000 nominal amount of the Notes and interest of US$9242.19 per US$250,000 nominal amount of the Notes will be due against Interest Coupon No. 9.

SWISS BANK CORPORATION INTERNATIONAL LIMITED
Reference Agent

THE ARTS

Architecture/Colin Amery

Art of drawing at RA's Summer show

It is a good thing to see that the Hanging Committee of the Royal Academy of Arts have continued the recent tradition of making Gallery VI the architecture room. Instead of being the tail end of the Summer Exhibition, as it always used to be, architecture is now at the very heart of the show.

Gallery VI is on the main axis, directly in line with the main entrance, the central hall and the stairs. Its position gives some of the submissions a particular prominence. As you brush past the large arrangements of artificial flowers at the top of the main stair it is Ben Johnson's acrylic painting of Crystal Palace that greets you.

He is an interesting artist who has chosen the highest of high-tech architecture as his inspiration. In this painting he returns to the crucial source of English architectural technology—reconstructing Paxton's triumph—something that has an added significance in the week that saw the opening of the new Lloyds.

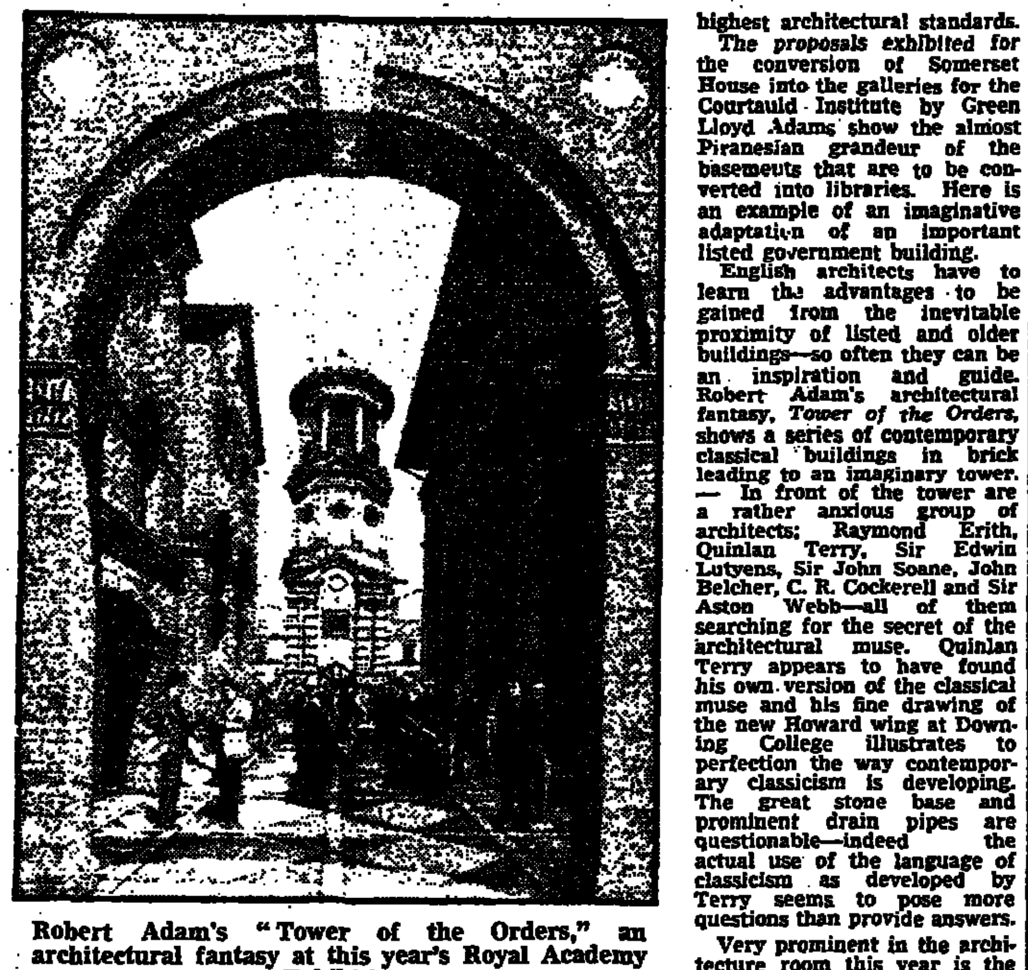
The selection of entries to the Summer Exhibition is bound to be somewhat arbitrary and to give prominence to the work of Academicians, but it is worth trying to uncover the themes that are to be discerned in the development of British architecture that are visible at Burlington House.

Clearly Joseph Paxton and his descendants — Richard Rogers and Norman Foster — represent the English fascination with engineering and the sort of architectural achievement that would be understood by Brunel. The small section of "high-tech" schemes that are on show this year do not really do this developing aesthetic justice.

We must wait for the Royal Academy blockbuster on the work of the troika of British architectural stars, Stirling, Foster and Rogers, that will fill the rooms on Piccadilly this autumn, to see this theme explored.

The other strong English theme is naturally enough the development of the vernacular into a new sort of contextual architecture. There is a danger in this — a sort of emasculated pitched roof, brick style will develop that will only satisfy the most philistine of planning committees.

There is a good example of careful and intelligent vernacular additions to an existing building in the scheme by Maguire and Murray for the additions to Bedales School. They are exhibiting a model that indicates the existing E. P. Warren 1907 Tudor style school and their own sympathetically scaled extensions. It is to be hoped that their interior can live up to the inspired work that survives in the libary by Ernest Gimson — that great arts and crafts designer.



Robert Adam's "Tower of the Orders," an architectural fantasy at this year's Royal Academy Exhibition

Infinitely less sympathetic and more worrying are the proposed Crown Estates redevelopment of the Royal Mint site by the Tower. While it makes sense to build on the cleared site behind the Mint to the East the quality of the proposals is simply not good enough for its context. The classical Mint by John Johnson which was put up in 1808-11 when the Mint moved from the Tower of London, has a reasonable Tuscan portico, a good long facade and some austere interiors by Robert Smirke. To surround it with the most mundane of office blocks is a scandal and a gravely wasted architectural opportunity. The Crown Estates Commissioners should think again about the quality of this work.

Equally worrying (but not exhibited at the RA) are the Crown's proposals (architects RMJM) to gut the interior of much of the Mint, keeping the Smirke rooms but taking up far too much space with lifts and "essential" commercial facilities. It is difficult to re-use large early Georgian buildings, but when they are listed Grade II* and in the care of the Crown it does not seem unreasonable to demand the highest architectural standards.

The proposals exhibited for the conversion of Somerset House into the galleries for the Courtauld Institute by Green Lloyd Adams show the almost Piranesian grandeur of the basements that are to be converted into libraries. Here is an example of an imaginative adaptation of an important listed government building.

English architects have to learn the advantages to be gained from the inevitable proximity of listed and older buildings—so often they can be an inspiration and guide. Robert Adam's architectural fantasy, *Tower of the Orders*, shows a series of contemporary classical buildings in brick leading to an imaginary tower. — In front of the tower are a rather anxious group of architects; Raymond Erith, Quinlan Terry, Sir Edwin Lutyens, Sir John Soane, John Belcher, C. R. Cockerell and Sir Aston Webb—all of them searching for the secret of the architectural muse. Quinlan Terry appears to have found his own version of the classical muse and his fine drawing of the new Howard wing at Downing College illustrates to perfection the way contemporary classicism is developing. The great stone base and prominent drain pipes are questionable—indeed the actual use of the language of classicism as developed by Terry seems to pose more questions than provide answers.

Very prominent in the architecture room this year is the new soft pencil school of architectural drawing: it is very pleasing when it is well done, as it is by Eric Parry and John R. Jones. The influence of the 1930s is all too apparent in the treatment of many new schemes with a sort of streamlined *detail combined with a breaking* up of the elements of facades.

It is a good year this year in that it demonstrates clearly the transitional nature of much British architecture, and the revival of interest in the actual art of drawing. It also clearly demonstrates, at least at the opening, that there is a tremendous public interest in architecture. To satisfy this it would help to have provided some more information with the exhibits. It does not make a great deal of sense to exhibit architecture as though it was a series of fine paintings—its very complexity demands some well written captions.

Medea/Lyric, Hammersmith

Martin Hoyle

Euripides's pugnacious, put-upon princess is the flavour of the year. Recent productions have seen her zooming off in a motor-car presented by the sun-god (Notting Hill) and striking a blow for white lib in a Haiti-like black Corinth (the Mold production recently seen at the Young Vic). A Japanese version looms on the Edinburgh horizon, not to mention a production from something called Gag Theatre as part of a forthcoming gay arts festival in Lambeth.

Medea's modern appeal is understandable. Not merely ill-used, she is actually a woman whose considerable status, dignity and career (presumably sorcery counts as a profession) have been sacrificed to a man's patronising egotism. Unusually for a heroic female figure, she refers to specifically feminine courage—fighting in the front line is compared favourably with child-bearing, for instance. She is in short a heroic *woman*, not merely a skirted male whose virtues are seen in masculine terms.

Our jealous modern god, psychology, clashes with the superhuman element of the Greek semi-divinities. Today it is hard to find a Medea who can murder her children convincingly. Mary McMurray's Hammersmith production carefully distinguishes between modernity and myth as tourists *stroll on to Jane Martin's faintly* cubist Greek ruins. ("Oh no," moaned the elderly lady in front of me at the bejeaned youth replete with blaring ghetto-blaster.) The action of the play is seen as a flashback.

Or rather as one of the Lynn Farleigh's funny turns. Miss Farleigh's temple visitor quivers as the stage darkens and we hear wind and jabbered whispers. There follows a vaguely modern-dress account of what Jason tetchily dismisses as Medea's unsatisfactory sex-life.

Miss Farleigh, rapt and intense in her dual-role of time-traveller and chorus, Darlene Johnson's Nurse, the children and Philip Bretherton's vest and track-suited Tutor are all in white. Madhur Jaffrey's entrance in black brocade epitomises the production's immediate theatricality. Lighting (Nick Chelton), sound effects —the amplified gurgles and screams of Medea's slaughtered children certainly disturbed my companion—and Richard Blackford's terse, tellingly-placed music contribute to an undeniable "show." What the production lacks is a viewpoint.

Alastair Muir

Madhur Jaffrey

Uncertain period—the two kings' lounge-suits are decked with jewellery, their pumps sport pom-poms: red-nails and one glove are the regal Corinthian fashion—avoids glib updating: but provides little else that is positive. Not even a vivid central performance. Mrs Jaffrey recalls a cultured product of the declining Raj, an anglicised Begum in a James Ivory film, perhaps. Beautiful hands and a face eloquent in dignified reproach and grief are betrayed by a limited vocal range. Ironically, it is easy to understand the "little woman" generalisations provocatively scattered throughout Philip Vellacott's translation: and to see how this Jason—Julian Glover, grizzled, in a black wind-cheater; excellent in odious condescension — could discount this well-bred matron.

John Burgess's Aegeus is a shrewd, bearded veteran (the part can often seem fatuous); Robert Reynold's urgently-spoken Messenger deserves better than to be forced to mime the death of Medea's rival like the contestant in a local poetry-reading competition. The production sometimes opts boldly for a near-operatic stand-and-deliver style. Iona McLeish's costumes provide the vengeful sourceress with a climatic silver sunburst outfit that seems to anticipate "Die Holle Rache" or at least an *Yma Sumac schreech. Much* theatricality, some good theatre.

Ghosts/Nuffield, Southampton

Michael Coveney

When *The Normal Heart* opened in London recently, it attracted comment along the lines of being the *Ghosts* of its day. But Justin Greene's taut and fast production of Ibsen's mould-breaking melodrama at the Nuffield, Southampton, emphasises the play's transcendental emotional qualities at no due expense to its social sensationalism.

The Nuffield introduces us to a very fine new version of the play by Arthur Kopit in in which Liv Ullmann starred opposite John Neville on Broadway in 1982. Mrs Alving and Pastor Manders are here played by Angela Thorne and John Woodvine, an excellent couple of fencing partners locked in evasive double talk over the establishment of a foundling home in memory of the dissolute Alving. Miss Thorne brings an impressively tight-lipped, worrying stage persona to illuminate a woman driven by guilt and righteousness, while Mr Woodvine wears his gloating respectability like a mask stretched to cracking point by years of polite grimacing: when the house goes up in flames, he greets the judgment on this house of sin as though standing in a pulpit before diving off uttering the desperate lament "And it wasn't insured."

The production is alive to such outrageous humorous juxtapositions of expression, and these are equally the work of Mr Kopit and Mr Greene. Into this suffocating smog has walked thet innocent Oswald, his digestive system clogged with foul pestilence. Grimy and blackened from the fire, he returns to the house to confess his love for the serving girl Regina (Karen Drury) and to shout his fear of staying where his instincts would be warped "into ugliness." As a painter, he is an obvious target for bourgeois contempt. But Douglas Hodge, adding yet another impressive major performance to his recent roster of a York Truewit, Cambridge Nicky Lancaster, Birmingham Romeo and Bolton Hamlet, converts Oswald into a trembling, impassioned registrar of enthusiasm and experience culled, in every sense of the word, out of town.

He represents the ecstasy of breathing, the delight in the outward symptoms of sexuality to which his mother and Pastor Manders are grown immune. "I gave you life," whines a distraught Miss Thorne, and Mr Hodge delivers the knockout blow: "I never asked for it. Take it back." Seated on a chair, waiting for the sun to come up, he suddenly goes as limp as a rag doll. The physical and physiological observation in this performance is of the highest class and Mr Hodge confirms his emergence as one of our leading young actors.

It is a shame, therefore, to find so fine an actor as Peter Kelly playing old Engstrand as if Ibsen had written a crude stereotype of a tongue-lolling, applause-cheating bold Scotsman with a funny walk and a gleaming eye.

It is extraordinary how Ibsem's dissection of social and moral hypocrisy still carries so theatrical a punch. That Pastor Manders should consider a fallen man to be incomparable to this stigmatised fallen woman remains a matter for an audience's bated breath.

"Early music" at the Bath Festival

Among the delights of the current Bath Festival is a lot of "early music," which nowadays means mediaeval or Renaissance music performed with an ear, and sometimes an eye, to the findings of modern research. Last weekend, with generous NatWest sponshorship, the Early Opera Project displayed the results of their work on Monteverdi and his *contemporaries, with* Monteverdi's *Orfeo*—long supposed to be effectively the first opera—as *pièce de résistance*.

The production was first seen in Florence, at the 1984 Maggio Musicale, with sets and effects by the Teatro Communale. *Orfeo* itself was first seen in 1607 by the Mantuan court and the local Accademia, who had encouraged the work, who doubtless set in comfortable chairs randomly distributed in a great hall (not a theatre), to watch the legend enacted by singing actors—a new tribe—with their various accompanying bands: single strings and recorders for Earth, motley brass for Hades and a continuo group. The actors danced, too, and since there was no established operatic routine they presumably borrowed their declamatory gestures from the courtly theatre. The directors of the Early Opera Project, Roger Norrington and Kay Lawrence, aimed to recreate all this (without pretending to unattainable "authenticity").

I expect it was fascinating. Unfortunately it was performed in the Assembly Rooms (one heard that the charming Theatre Royal, infinitely more audience-friendly, had been rejected because of its desiccated acoustic), in a very long, perfectly flat hall, with 22 rows of immovable seats facing the low stage platform, with its Palladian "Arch of Honour," at one end. One could *hear*, if swimmily, but not more than a *third or so of the audience* could see the action—at best just heads and shoulders, so long as the actors didn't kneel, recline or descend the front steps. Viewers in the back rows (like most of the London critics: for a report from Row D you will have to read the Guardian) could at least stand. Even large German opera houses do not charge £15 or £20 for a *Hörplatz* or a *Stehplatz*.

The bands of ancient instruments were at any rate a lively pleasure, and Norrington's earlier claims (various lectures were part of the Early Opera event) about the happy voice-instrument balance of Monteverdi's original conception were borne out. The *jeu* of the singers may have contributed mightily to the effect close up, for all I know; certainly the action was presented in plain, dignified outline by the multi-parted ensemble of singers. As Orfeo the only non-English participant, Guy de Mey, sang with the most communicative flair and exuberant gestures.

From a distance—not really jaundiced, I think—the general deportment was too tame to distinguish it from less historically ambitious realisations of *Orfeo*. Full-blooded posturing, such as Italian paintings of the period represent as common parlance, was shyly attempted. Equally, the bite-less Italian diction of most of the cast (telltale signs: equal emphasis on significant syllables and on mere grammatical endings) served Monteverdi's words-and-music ideals indifferently, though in purely musical terms the madrigal-ensembles were consistently satisfying to hear. The costumes had their own period charm, like the Italian backcloths and the pretty opening-up for Orfeo's final redemption by Apollo.

In fact the whole performance sustained its interval-less hour and a half very well, ful of musical details to surprise and reward those who have learned to love the score in modern compromises. It remained decidedly English *Monteverdi, by the standards of* re-created performance at which it aimed. And the trouble with those standards in practice is, of course, economic; how can it be economic now to reproduce for a large paying audience what was conceived on a chamber scale for a small appreciative élite who would fund occasional spectacles?

We had had an hors d'oeuvre the previous night, a potpourri of partly theatrical music by Monteverdi, Salamone Rossi (two fine pieces), de Wert (the superb madrigal "Ah, dolente partita") and others. Some simple dances (as far as one could see) were performed with moderate panache. In dance as in music, one of the toughest nuts for historical musicology is the question of amplitude of expressive gesture: how much would have been thought too much, too little and dull, over the top, inelegantly charmless? All these Early Opera essays were pleasurable in their own right; they rarely struck the bell of intuition which says—it doesn't matter if it's false—"This is how it must have been."

David Murray

Rattle/Barbican Hall

Dominic Gill

Simon Rattle used to be a conductor most notably at home in the late 19th-century and 20th-century repertoire: but the account he directed on Thursday of Haydn's D major symphony No 70 at the start of his concert with the City of Birmingham Symphony Orchestra showed him to have extended his range decisively. I can't remember hearing a Classical symphony under his baton of such ease and incisive elegance, or so deftly proportioned. The whole performance was a de*light: the finale especially, deli*cate and fiery by turns; and the second-movement canon, whose poetry and logic were embraced with splendid clarity.

The urgent, flowing maestoso of the opening movement of Brahms's D minor piano concerto is not a tempo (or a manner) which every conductor gets right by any means—but Rattle caught it exactly: neither too slow (which might confuse the dramatic impact of the following adagio), nor too fast, so that the instrumental textures, and more important the rhetorical phrase-edges, are blurred. John Lill was the soloist—the second concerto I've heard from him in only a few months which he has played with unusual distinction. The tone was big and powerful, but admirably flexible and full of variety: a reading with none of the bombast or square-cut edges which one remembers from performances only a few years ago. One or two of the rubatos in the adagio were perhaps just a shade heavily prepared for: but that slow movement was otherwise exemplary, very slow and austere, full of mysterious contrary currents.

Rattle and the CBSO ended with Bartok's Concerto for Orchestra: not an account of such instrumental finesse as either the Haydn or the Brahms—the pacing and phrasing never seemed as perfectly jointed, or the textures as securely balanced.

Plowright out

Exhaustion has forced Rosalind Plowright to withdraw from the title role of *Mary Stuart* in the English National Opera production which opens at London Coliseum on Wednesday. Greek soprano Jenny Drivala replaces her, singing in Italian, for the first three performances (June 4, 10, 14, with young English soprano Faith Elliott taking over for the rest of the run (June 16, 19, 21, 24, 27).

Arts Guide

Music/Monday. Opera and Ballet/Tuesday. Theatre/Wednesday. Exhibitions/Thursday. A selective guide to all the Arts appears each Friday.

Music

May 30-June 5

NEW YORK

Bargemusic (Fulton Ferry Landing): Chamber music recital with William Doppman, piano, and Julie Rosenfield, cello. Haydn, Brahms, J. S. Bach. Brooklyn (6244061)

WASHINGTON

National Symphony (Concert Hall): Mstislav Rostropovich conducting William Steck, violin. J. C. Bach, Brahms, Copland; Mstislav Rostropovich conducting, Wagner, Mahler (Thur). Kennedy Center (2543776)

CHICAGO

Chicago Symphony (Orchestral Hall): Jesus Lopez-Cobos conducting. Prieto, Ravel, Rimsky-Korsakov (Thur). (2358111)

TOKYO

Chisato Ogino, piano: Händel, Brahms, Schumann. Tokyo Bunka Kaikan Recital Hall. (Thur) (5711689).

LONDON

Philharmonia Orchestra, conducted by Giuseppe Sinopoli, with Uto Ughi, violin. Brahms and Bruckner. Royal Festival Hall (Mon). (9283191).

Philharmonia Orchestra, conducted by Yan Pascal Tortelier, with Shura Cherkassky, piano. Glinka, Rachmaninov and Sibelius. Royal Festival Hall (Wed).

Claudio Arrau, piano: Beethoven. Royal Festival Hall (Tue).

PARIS

Montserrat Caballe recital. Théâtre de l'Athenée (Mon). (47426727).

John Williams, piano (Mon) Salle Pleyel (45610630).

Ensemble Orchestral de Paris conducted by Jean-Pierre Wallez, Henryk Szeryng, violin: Vivaldi, Schumann, Saint-Saens, Kreisler (Tue) Salle Pleyel (45610630).

Kuentz Choir and Orchestra, Monique Frasca-Colombier, violin, Sophie Kuentz, violin: Händel, Mozart, Cambini (Tue). Saint-Severin Church (46336761).

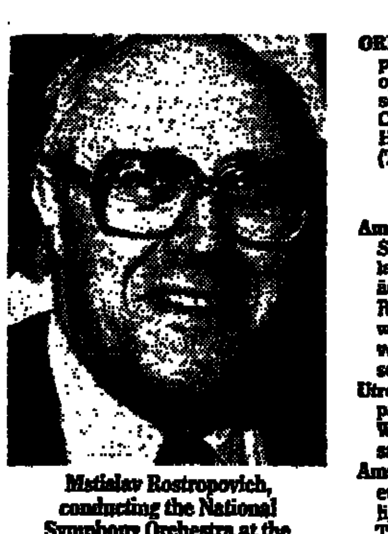
Philharmonia Orchestra, conducted by Giuseppe Sinopoli, with Tsuyoshi Tsutsumi, cello. Respighi, Takemitsu and Tchaikovsky. Royal Festival Hall (Thur).

Orchestre National de France, conducted by Eric Leinsdorf: Liszt (Wed) Salle Pleyel (45630796).

Maurizio Pollini, piano, Debussy, Chopin (Wed). Théâtre des Champs Elysées (47234777).

Belgium Opera Symphony Orchestra, conducted by Gunter Wagner, Sylvain Cambreling/Jose Van Dam, bass, Stuart Burrows, tenor: Mendelssohn's Elijah (Wed) TMP-Châtelet (42334444).

Ensemble Orchestral de Paris, with Henryk Szeryng, as conductor and soloist, Huguette Dreyfus, harpsichord, Pierre Roullier, flute: Bach (Thur), Salle Pleyel (45610630).



Mstislav Rostropovich, conducting the National Symphony Orchestra at the Kennedy Center, Washington.

Royal Philharmonic Orchestra, conducted by Yuri Temirkanov, Garrick Ohlsson, piano: Brahms, Berlioz (Thur), TMP-Châtelet (42334444).

VIENNA

Robert Holl, Lieder, Oleg Maisenberg, piano. Rachmaninov, Scriabin, Tchaikovsky, Borodin, Mussorgsky. Musikverein, Brahms Saal. (Mon).

Vienna Hofburg Orchestra, conducted by Gert Hofbauer, waltzes and light opera. Konzerthaus (721211). (Tue).

Vienna Symphony Orchestra, conducted by Hans Vonk, Schreker, Berg, R. Strauss. Musikverein. (Wed).

ORF (State Broadcasting Corp) Symphony Orchestra, conducted by Leopold Hager, with Jolanta Radek, soprano, Carolyn Watkinson, alto; Claes H. Ahnsjoe, tenor; Robert Holl, bass. Mozart. Musikverein. (Thur).

NETHERLANDS

Amsterdam, Concertgebouw. Thomas Sanderling, conducting the Netherlands Philharmonic, with Maria João Pires, piano. Beethoven (Wed). Recital Hall: Mondriaan Quartet, with Madeleine Milhaud-Milhaud, voice, and Marjanne Kweksilber, soprano. Milhaud (Wed). (718345).

Utrecht, Vredenburg. The 1986 Liszt piano concours. First round Mon to Wed, 11, 2 and 8 pm; second round same times Thur. (314544).

Amsterdam, Tropeninstituut (Linnaeusstraat 2). The music of Islam: religious songs from Brunei (Mon, Tue); improvised sacred poetry from Indonesia (Wed, Thur). (5688500).

The Asko Ensemble conducted by Denis Cohen, with modern French works by Cohen, Fenelon, Amy and Barraqué. Tue in Amsterdam, Paradiso (237348). Thur in Eindhoven, Schouwburg (111122).

ITALY

Milan: Teatro alla Scala: Aldo Ciccolini (piano). Debussy. (Mon). (809126)

Florence: (Maggio Musicale Fiorentino) Teatro Comunale: London Symphony Orchestra conducted by Claudio Abbado. Ligeti, Tchaikovsky and Dvořák (Thur) (2779236).

Saleroom/Antony Thorncroft

The last of Edward James

The major sale of the summer starts on the lawn of West Dean House in Sussex today. Christie's is disposing of the collection of the late Edward James, the renowned Surrealist.

Most of his finest paintings went years ago, notably a Picasso, *Femme assise au chapeau*, which made $4.29m in 1984. However, the publicity surrounding the decision of the Trustees of West Dean (now used to train craftsmen) to sell off the items, and in particular to put on the market Monkton, James's Surrealist retreat a few miles distant, should ensure huge crowds and a multi-million total.

The auction is unusual in containing many good pieces of furniture bought by Edward James's parents, Mr and Mrs Willie James, heirs to a great American fortune. They filled West Dean with luxurious furnishings, and a Louis XV black lacquer commode by Bernard van Risenburgh (BVRB) could make £60,000, with three rare *Gothic panels fetching* £30,000. An oddity is a Louis XIV gilded and painted sedan chair, possibly of royal origin, which has a £15,000 top estimate.

Edward James bought Regency and Baroque pieces to furnish Monkton, and a suite of mid-Georgian seat furniture, covered in brightly coloured floral tapestry, could sell for £90,000. Among the minor major paintings still for sale are works by Dali, Tchelitchev and Leonora Carrington. A small panel by Magritte, who often stayed with James, is included in the sale: an ingenious *trompe l'oeil* entitled *Paranoiac Face*. It carries an estimate of £30,000-£40,000.

Some high prices were paid for pictures in overseas salerooms at the end of last week. At Sotheby's in New York a *portrait of Mrs Cecil Wade by* John Singer Sargent sold for £951,923, a record for the artist. It was painted in 1886 in London. *A gray day in the park* by William Marrit Chase did well at £183,333. The auction of American paintings totalled £6,161,586, with 23 per cent unsold.

Meanwhile at Christie's in Amsterdam, there was a record for any work of art auctioned in the Netherlands—£505,641 for a still life by the Dutch 17th-century artist Jan Davidsz de Heem. A village scene by Pieter Brueghel the Younger made £202,256.

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Monday June 2 1986

Lawyers cling to old rules

THE FIRST Annual Conference of the Bar, held last week, was convened to counter the rising tide of public criticism of the divided legal profession. It did not achieve its purpose. On the contrary, this symposium of special pleadings, however brilliant, went against the grain of those who have to pay in terms of money, delay and managerial time for the Bar's monopoly of courts and the solicitor's monopoly of clients.

Nor did it gain the Bar any sympathy from those who, though not directly affected by the restrictive practices of the legal profession, are aware of the damage done to the economy—and to society as a whole—by putting the judicial resolution of disputes out of reach of most people, in spite of the escalating costs of legal aid.

The Bar used the opportunity of the conference to attack recent attempts to make the administration of justice more efficient, such as curbing by the Law Lords of the Government's proposals for reform of patent litigation, and the plea by 100 MPs for the establishment of a family court and even the proposals for a simpler and faster disposal of personal injury claims, supported by the Lord Chancellor.

This negative attitude to change seems to stem from the short sighted view that the well-being of the profession depends on its monopoly of the courts and on outdated procedures which allow the barrister to stretch his oral pleadings over days and weeks—keeping in court his opposite number, juniors, solicitors, managers and experts. The client has to pay for all their time—and the taxpayer pays for the time of judges.

Direct access

This view of the world is no longer shared by the younger generation at the Bar, which realises that to survive the legal profession will have to improve its efficiency and learn to live in a competitive environment.

The main argument of the leaders of the Bar is that it provides specialists needed by the generalist solicitor. This is no longer true. The training of solicitors is more demanding than that of barristers. City law firms now have more specialists in the field of business law than the Bar. They can well look after the interests of their clients in the High Court when they appear in chambers without barristers. It is ridiculous to assert that, after six months' pupillage, a barrister is better equipped to appear in a court than an experienced solicitor.

Any deregulation of the profession would give barristers direct access to clients; this would probably more than compensate for the loss of the monopoly of higher courts. Some members of the English Bar have already had a taste of working with large clients—accountants and insurance companies, for example—without the intermediary of solicitors, and they like it.

Restrictive practices

Unfortunately, the movement for reform within the Bar is not helped by the attitude of the Government as revealed by Lord Hailsham's opening speech at the Conference. The Government's opposition to a more competitive environment within the legal service was already evident in its response to the report of the Royal Commission on Legal Services, three years ago. However, much has happened since then. The need to streamline the legal service and make it more efficient has been made urgent not only by developments in the City but even more by the increasingly difficult task of maintaining law and order while preserving the individual rights of the citizen.

The profession has so far *succeeded in enforcing its* restrictive practices. The access of solicitors to higher courts could be opened by the college of judges, but, by statute, these are selected exclusively from barristers. This rule ought to be changed.

No statute, however, prevents the direct contact between clients and barristers. This restrictive practice, doubling costs and delays, is a suitable case for reference to the Monopolies Commission. The Director General of Fair Trading, Sir Gordon Borrie, should consider this possibility.

Africa's strong case for help

A LECTURE in Reaganomics by the US Secretary of State, Mr George Shultz, and a homily from Sir Geoffrey Howe are not what African states meeting at the United Nations last week to discuss the continent's economic crisis either expected or deserved from two influential aid donors.

All agree on the gravity of Africa's condition. What is at stake is the credibility of western-inspired reforms adopted by more and more African countries. They are finding that compliance with policies advocated by the World Bank and the International Monetary Fund (IMF) and backed by western governments are not in themselves enough to generate an economic recovery. Substantial additional resources are required to restore run-down factories and infrastructures, while ways have to be found to ease the burden of the continent's external debt. The failure last week of western countries to tackle this fundamental problem puts in jeopardy the progress that has been made.

Economic adjustment

The clearest warning that the recovery programme for the continent was in danger came earlier this year from the World Bank itself. In a report on financing the African recovery, the bank, whose earlier three analyses of the crisis have provided the blueprint for the reform and recovery programme drawn up by African states for the UN session, declared unequivocally: "Africa's attempts to help itself will fail without additional resources in the form of new aid and debt relief."

To continue its progress towards economic adjustment, says the bank, low income countries in Africa will need at least $11bn a year in concessional flows during 1986-90. Allowing for existing aid commitments, a gap of $2.5bn remains. Multilateral agencies could at best be expected to fill $1bn of this gap, says the bank, assuming a successful $12bn eighth replenishment of the International Development Association (IDA) and assuming that low income Africa receives the bulk of the $3bn now becoming available from the IMF's trust fund.

Even for those countries which are taking the IMF and World Bank medicine the picture is bleak. Zaire, singled out for praise by Mr Shultz, has in recent years been a net exporter of capital as it struggles to meet debt commitments at the cost of much needed infrastructural projects. Repayments by Ghana to the IMF are the main factor in boosting the country's debt service to over 50 per cent in the next three years — an illustration of the need for a much longer time scale over which recovery policies can take effect. Zambia faces the prospect that debt servicing — even after rescheduling — will consume between 40 and 50 per cent of export earnings in the medium term.

Efficient spending

Undoubtedly there are reforms which both donors and *recipient governments have yet* to implement. Co-ordination among donors remains weak, while real effective exchange rates in low-income countries are still 15 per cent higher today than in the early 1970s, leaving most national currencies overvalued. Many African governments, short of skilled manpower, have great difficulty in spending efficiently the existing funds available. Ghana cannot disburse more than a third of the aid available because of its cumbersome bureaucracy, lack of skilled personnel and the complex procedures of donor governments.

Yet these reforms in themselves are not enough. Nor does the answer lie in Mr Shultz's suggestion that given "individual initiative" and the creation of a favourable investment climate, Africa can put itself back on its feet using little more than existing resources.

The call by African countries for a major restructuring of external debt and greater support for reforms already under way deserves a more sympathetic response.

Photocopiers: the EEC's anti-dumping investigation

How Xerox upped the ante

By Jane Rippeteau

JOHN C. PEMBERTON, a top Rank Xerox executive, thought some of his salesmen had lost their touch. His West German subsidiary had *had a drastic* slide in profitability.

Time and again, against particular Japanese contenders in the photocopier market, he recalls, "We'd all be in for a deal, and suddenly the business went. Our guys would get all the way, and then couldn't do the deal."

Early last year, a contract with a major German company was snared by a distributor of copiers made by Japan's Mita. "The prices were so extraordinarily low," recalls Mr Pemberton, "*it was difficult to* see how they could make any money."

That was the last straw. The transaction triggered the largest—and perhaps the most significant—dumping case yet brought before the European Commission which is expected to result this month in dumping duties on Japanese copiers imported into the EEC. The Commission will not comment, but about $1bn worth of machines imported annually are likely to be involved.

The Commission is expected to find dumping margins of up to 40 per cent, though the duty imposed would be less.

Already the threat of tariffs has unleashed a rush of defensive activity by Japanese producers, which rely on exports to absorb fully 85 per cent of the copiers they make. For example Canon plans to add, and Ricoh and Toshiba to begin, copier production in Europe while another defendant, Minolta, recently sewed up a controlling interest in one of the *few* remaining European copier producers.

Not that this activity betrays any admission of guilt. As one executive insists: "We are exporting at fair prices, so any allegations are without foundation."

The case, mounted by Rank Xerox and four other European copier makers, is among a number of recent anti-dumping actions taken by the Commission against Japan, in particular, under the General Agreement on Tariffs and Trade (Gatt). Fuelled by fears of Community unemployment and technological inferiority, the actions have sought to raise the price of Japanese imports from outboard motors to electronic typewriters.

Not everyone, however, believes such moves hold long-term benefit for European industry. They increase the risk, argues Mr Christopher Norall, attorney with Forrester & Norall in Brussels, of augmenting protectionist sentiment elsewhere, "notably the United States" and possibly "against the Community."

There are other dangers, experts say. While European makers hope the new offshore production will increase Japanese manufacturers' costs and thereby prop up prices, it could have an opposite and far-reaching effect, says Mrs Monica Camahort David, a leading industry analyst with Dataquest in Cupertino, California. "This has worldwide implications," she says. "Increased production in Europe means a huge increase in world manufacturing capacity."

She agrees Japanese producers would be distanced from special supplier relationships and manufacturing efficiencies at home. But she says the net effect of the overcapacity would be to "exacerbate the market's already extreme price pressures."

Those price pressures are the result of Japan's entry into the photocopier business a decade ago.

The business was launched by Xerox Corp in the 1960s when it commercialised the xerographic process invented by Chester Carlson in 1938. But as Xerox moved up-market, *building ever faster and more* highly-featured machines, with higher sales margins to match, it tended to neglect the low end of the market. (The low-end machines which it does sell are supplied by its Japanese affiliate Fuji Xerox.)

Then, when the Xerox patents expired in the 1970s—in a scenario similar to a number of industries including British motorcycles—competitors swept into the low-end of the market.

And the most successful among them were the Japanese. "They saw they could enter at the low end with a simpler machine," says Mr Richard Harwood, research director at stockbrokers Scott Goff Layton, now part of Smith New Court. "They used commodity components," whereas Xerox had favoured custom-made designs. And, importantly, "because the technology was simple, non-specialist dealers could service their machines," giving the Japanese a wider range of distribution and marketing options.

Japan's lower cost machines sold in high volume, giving the producers production economies of scale that other contenders could not match. Some were driven out of the business *altogether*. Both Pitney-Bowes and 3M in the US dropped production, opting instead to distribute machines made in Japan by Ricoh and Toshiba respectively. In Europe, Gestetner did the same with Mita.

Survivors include IBM and Kodak, but both manufacture just for the very high-end *segment* that Japan has not strongly penetrated. And in a widening trend toward new distribution alliances, Kodak last year began marketing Canon machines. In the end, Japan's tactics have secured its producers a better than 90 per cent share of world copier shipments today, according to Mrs David of Dataquest. They include a hot, new, very low-end category called personal copiers.

The pressure on Xerox's profitability were also severe. Competition, along with slower industry growth, drove prices down "about 10 per cent per annum for 10 years," says Mr Derek Bainbridge, an analyst with Rowe & Pitman. And, having ceded the low end of the market to the Japanese, Xerox soon found those same competitors flooding into its stronghold sector in the middle and upper ends of the market. Especially threatened was its core business in "mid-volume" machines of some 40,000 to 80,000 copies per month.

With so much of the company riding on reprographics, dropping production was not an option for Xerox. It had to fight off the Japanese on the factory floor.

In a major corporte effort beginning about five years ago, the company reduced design time from initial concept to production from, it says, six to two or three years, and cut unit manufacturing costs to develop an entirely new line of mid-volume machines called the 10 Series, unveiled in 1984.

The feat was widely praised, and most observers say it at least stemmed the erosion of market share to Japanese producers. Xerox still dominates in the mid-volume sector, as well as at the high end of the market, analysts say. And they add that, even though volumes are lower, margins are much higher, with the result that Xerox can still claim between 30 per cent and 40 per cent of the total world photocopier revenues of $30bn to $35bn, including sales, service, rentals and supplies.

In the anti-dumping case, Xerox, with $9bn in 1985 revenue, is taking its battle against the Japanese on to a new plane. To the surprise of some, it is making clear that it is willing to compete with a tariff weapon as well to protect its core business in mid-volume.

Rank Xerox, with some 80 per cent of its sales in Western Europe, says the mid-volume sector accounts for half of its revenues. The company claims a 14 per cent share of copier sales by volume in Europe, just under a third of the world market.

Although the action was initiated by Rank Xerox, the company is 51 per cent owned by Xerox and is managed much as a wholly-owned subsidiary. Top management approval from Xerox in the US was given because Rank Xerox "was abiding by EEC requirements and their Japanese competition was not," says Mr William F. Glavin, Xerox reputy chairman.

After the German sales loss, Rank Xerox got together with Oce of the Netherlands, a private West Germany copier maker called Develop, French producer TETRAS and Italy's Olivetti in the Frankfurt offices of the *VDMA, Germany's* industrial trade association, according to Mr Pemberton. The group formed the Committee of European Copier Manufacturers (CECOM), swapped notes about suspected illegal price competition by Japanese suppliers, and set out to document it.

By July, they had filed an anti-dumping complaint accusing the Japanese of charging less in Europe than they do at home for the same products, with the extra domestic revenue subsidising overseas sales.

While the Commission is believed ready to find that dumping has occurred, no Japanese company is expected by those close to the case to be found guilty of more than a 40 per cent disparity. The actual duties are based on the amount of injury the Commission decides such disparities cause.

CECOM in one case cites Toshiba as charging 38 per cent more at home for a copier that competes directly with a Rank Xerox machine in Europe. CECOM alleges that the extra revenue from higher-priced sales in Japan means Toshiba can undercut Rank Xerox by 20 per cent in Europe.

If the Commission concurs, Toshiba would have to pay a dumping duty of 20 per cent, in addition to regular import duties on the product. Just last year, the Commission saddled Japanese typwriter imports with dumping duties of up to 35 per cent. Indeed, the action at the time was a key incentive in getting CECOM *started, and the group quickly* signed up Cologne lawyer Dr Dietrich Ehle, closely involved with the typewriter case.

Meanwhile, the Japanese have coralled their natural allies among the many European companies that sell their copiers through a multi-faceted distribution network, including sourcing, private label and their own marketing companies.

Gestetner, selling Mita copiers through subsidiaries worldwide, argues that tariffs will increase prices to consumers, dampening demand and forcing cuts in sales, servicing and marketing staff. "There would be net job losses in the EEC," says Tim Hammond, marketing planning manager at Gestetner International in London. "Tariffs would have a serious impact on our business."

The latest scramble by Japanese producers has been to set up European production. Market leader Canon, in Europe for a decade with a German plant and later one in France, says it is expanding in Germany to cover up to 90 per cent of European sales by year end.

Toshiba has a production joint venture with French chemicals maker Rhone-Poulenc, and Mita is covering its bets by producing in Hong Kong, hoping products made there will be exempt from any EEC tariffs. Ricoh, adding a copier line to its UK plant, says a decision on further European production "depends on how much tax is imposed."

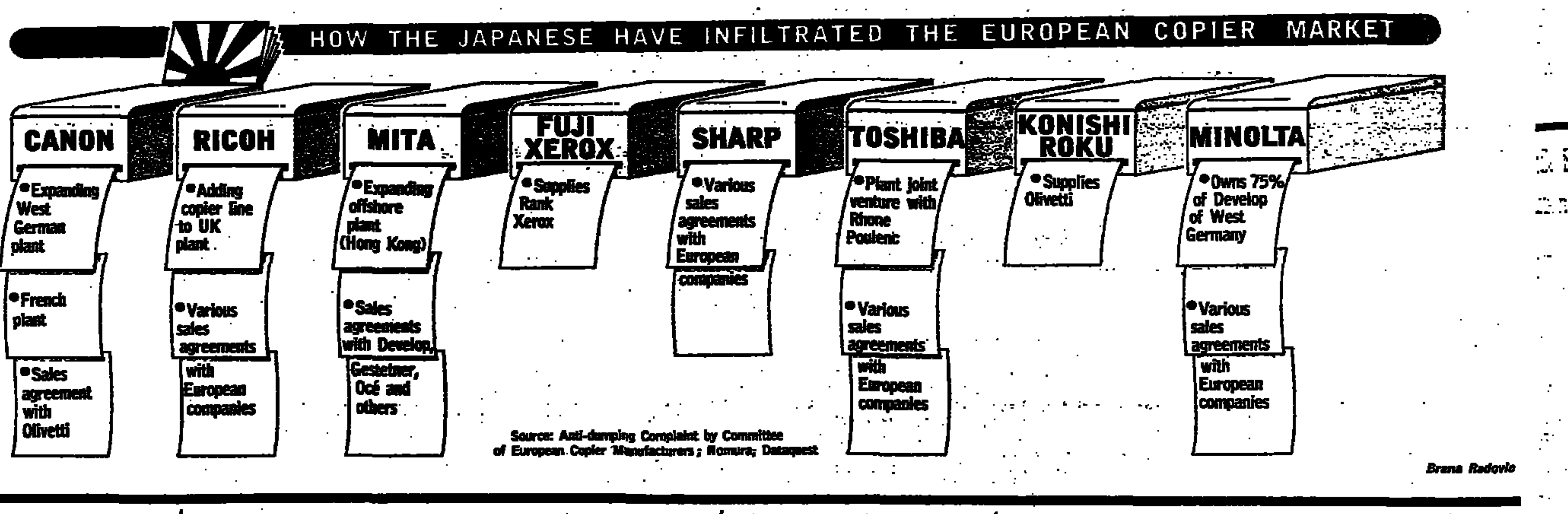
In the most ironic twist, Minolta engineered a 75 per cent stake in Develop—a party to the anti-dumping complaint. "They were looking to take advantage of our product planning, and Minolta gets access to Develop's production capacity," says Mr Richard Rosser, marketing services manager at Minolta UK.

European makers complain that most of the plants are simply to circumvent duties and will be used for assembling imported parts rather than for producing copiers from scratch.

Some executives say the European Commission is already considering extending tariffs to cover photocopier parts. The Commission will not comment.

Rank Xerox executives say they are prepared to start all over again, levying an anti-dumping complaint on parts if necessary to stop what it believes is Japan's crusade to "buy the market."

Xerox has already diversified into office automation and other businesses to reduce exposure in reprographics. But in its trade law actions against Japan, it has shown the lengths to which it will go to maintain what is still a major hold on the market it created.



Source: Anti-dumping Complaint by Committee of European Copier Manufacturers; Nomura; Dataquest

Brana Radovic

Men and Matters

Midland's man in Japan

It is not every day that a 57-year-old Japanese businessman is chosen for a senior job at a UK clearing bank, or any UK bank for that matter. But Keiichi Yoshida, currently head of Midland Bank's Japan operations, has had more than 35 years' experience working for foreign banks and is looking forward to spending some time in England.

Yoshida will shortly become a corporate finance director for Midland in London, with direct responsibilities for Japanese corporate clients on an international basis, specialising in the UK. A Citibank man from the start of his career until two and a half years ago, Yoshida is one of the few Japanese executives who seems to have successfully straddled the culture gap between Japan and the West.

His most important skill? Interpreting Japanese corporate behaviour to his western colleagues. "You can't expect direct answers, or direct questions when you first meet a potential Japanese client," he cautions.

As an architect of some of the financing deals done for Nissan's new plant now under construction in the UK, Yoshida anticipates a "boom" in Japanese investment in Europe and the UK. "So far, it has mainly been sales-related investments. But now we are going to see more manufacturing investments. I'm 100 per cent positive there will be more and more investment coming to the UK," he says. This is mainly due to a stronger yen, he says, but is also because Japanese companies are becoming more international all the time. Just like some of Japan's businessmen. . . .

Rival gods

When Cable and Wireless got a listing on the Tokyo Stock Exchange in April it was tickled pink by the standard gift that the exchange gives to all newcomers: a dull copper plaque bearing the image of the god Mercury. Delighted to display the namesake of C and W's telecommunications subsidiary, Sir Eric Sharp has given the plaque pride of place in his own office.

But when British Telecom went through the same presentation ritual on Friday, one might have expected the token to go down rather less well. Some officials at the Tokyo exchange looked on anxiously, lest BT should take offence at being offered a trophy bearing a competitor's mark.

Nobody need have worried—the irony was quite lost on Sir George Jefferson, who was under the impression that the plaque glorified some other god altogether.

Sweet spaghetti

The re-entry of Ferruzzi, the giant Italian food and agricultural group, into the battle for S and W Berisford, has puzzled many a City of London analyst.

Two months ago, the Italians withdrew after fierce, some say xenophobic opposition from Britain's *sugar* farmers and MPs. As a private company not accustomed to a public hullaballoo, Ferruzzi sold its share stake in Berisford to Hillsdown Holdings, the UK food and furniture maker.

Having reacquired the Hillsdown stake last week, Ferruzzi now faces the task of persuading the City and the UK Government to think the apparently unthinkable: Italian control of Berisford's UK sugar beet monopoly, British Sugar. It *must also match* a powerful lobbying machine at Tate and Lyle, the rival bidder. No wonder Barclays Merchant Bank, Ferruzzi's advisers, were heard to ask last week. "Do you know any good lobbyists who speak good Italian?"

Stereotype

Investors may get a strong sense of deja vu as they read through the Lopex prospectus, published today. Lopex, it says, was "one of the first to recognise the demand for a comprehensive range of marketing communications services on an international basis."

Strange, because Charles Barker's offer document, released last month, contained a similar claim. Prospective shareholders were told that Charles Barker is "the most experienced multi-service communications group in the UK today, having pioneered a strategy that other major advertising groups in Britain are now seeking to emulate."

At least each should have been able to establish its respective identity in the pre-flotation publicity exercise—which is their profession, after all. Unfortunately, Lopex, having fixed a meeting between the press and its chairman, cancelled at the last moment with scant explanation, while a similar attempt by Charles Barker ran into trouble as its chairman managed to double book his diary.

Harry's parrot

The Harry is the latest offering in a stream of electronic gadgets from Quantel, a fast-growing company that specialises in special-effects equipment *for TV studios.*

The what, do I hear you say? The odd name of Newbury-based Quantel's product is a result of an engagingly eccentric tradition to christen research projects after the people who dreamed them up.

Harry was the technician who first thought of a machine which would store TV pictures on digital tape in TV studios. Normally Quantel, which has annual sales of £50m and is expanding output at 30 per cent a year, gives its products a more sensible name after they leave the development laboratory and are offered to customers. On this occasion, however, no one could think of a better title and so Harry it remains.

Another illustration of this tradition was the name "Tony" initially given to the company's best-selling electronic paintbox, a machine that permits artists to create a range of illustrations electronically. There was also the "Derek" that ended up called a boring old Standards Converter.

Perhaps the best loved Quantel product, at least among its own staff, was another machine for TV special effects, initially called the Parrot and now sold as Mirage. The equipment was named after the famous Monty Python parrot sketch.

So ingrained has this episode become on Quantel's corporate culture that the chairman, Peter Michael, gave his research team a real, live parrot a couple of years ago. The scientists adopted it as a pet and the bird still flies around the company's development laboratory, much to the consternation of visitors.

Blank outlook

The future is looking brighter for the industrialised world, says stockbroker Hoare Govett in its June edition of Economic Outlook. One cannot help wondering whether its authors are quite convinced—the press release which *announces the publication* of the 42 page report is a blank sheet.

Observer

FOREIGN AFFAIRS

Who will police the policemen?

By Ian Davidson

PRESIDENT REAGAN'S public notice of intent to breach the weapons limits of the unratified 1979 Strategic Arms Limitation Treaty is a *retrograde step*, regretted by America's European allies and deplored by supporters of arms control in the US. The White House decision cannot be turned, in any meaningful sense, to Washington's advantage, and it may yet prove dangerous. Yet it is too facile merely to decry President Reagan's surrender to the hawks in the Pentagon; it is more rational to blame the accumulated acts of both superpowers over the years for a move which had unfortunately become by now, almost unavoidable. Moreover, the critics may be over-dramatising a decision which, in practice, need not prove all that dramatic. Almost everything depends on what the Russians do from now on.

It had become inevitable, because the Reagan administrahas long harboured a gut suspicion that the Russians are prepared to lie, to cheat, to steal in order to secure unilateral advantage. Over the years it has built up a dossier of complaints that the Russians are indeed cheating on existing arms control agreements. Since the administration has advertised these complaints with ever greater public insistence, and since the Russians have as insistently denied all wrong-doing, there was only one possible outcome: sooner or later, the US was bound to retaliate, at least symbolically.

In President Reagan's defence, it needs to be said that the promised retaliation is measured, minimalist and militarily insignificant, and has been twice deferred: on two occasions he has announced the scrapping of old Poseidon missile submarines in order to make room, under the Salt II ceilings for new Trident boats, and the equipping of the 131st B-52 bomber with air-launched cruise missiles towards the end of this year will make no perceptible difference to the strategic balance. But if this is purely symbolic retaliation, what exactly does it symbolise?

At one end of the spectrum, it may turn out to be no more than a ritual gesture: America is not going to take Soviet cheating lying down. The Russians have never brought their strategic nuclear arsenal down to the Salt II ceiling of 2,400 missiles and bombers — it currently stands at 2,504, and may be significantly higher than that, according to a senior US official — so they can hardly gripe at one measly extra bomber. At the other end of the spectrum, of course, the symbolism might turn out to be much more ominous: if the two superpowers fail to handle the problem with prudence and imagination, the deployment of one measly bomber could start a tit-for-tat unravelling of the entire arms control legacy of the 1970s. All one can say for certain is that it is too soon to assume that alarm is the only possible reaction.

Critics of President Reagan's decision have pointed out that the unravelling of the Salt II contraints, even had they previously been observed by the Soviet Union, would not naturally benefit the US. The treaty sets ceilings, not merely for different categories of weapon, but also for the numbers of warheads that can be carried on each strategic missile type. The biggest Soviet land-based missiles are bigger than anything in the US arsenal; so if the Russians decided to break these warhead sub-ceilings, they could surge dramatically ahead in total numbers of warheads.

It is not obvious why the Russians should embark on this course of action, however; it is even less obvious why they should embark on it in immediate retaliation for one B-52 bomber. At current levels, both superpowers have such large numbers of warheads, missiles and bombs, that it would be difficult to discern the strategic utility of further increases.

Moreover, nothing in the Soviet posture gives the faintest hint that they would look with equanimity on the kind of unravelling of the received corpus of arms control agreements that could lead to an all-out arms race. On the contrary, one of the most consistent and often-repeated themes of the new leadership has been the importance of arms control and calmer international relations, the need to negotiate new agreements, the need to reduce or even eliminate nuclear weapons.

Suspicious minds argue that Mikhail Gorbachev is a wily fellow whose *only* objective is to secure a breathing-space for Soviet ambitions. Certainly, after a year in power Mr Gorbachev looks much less a radical, let alone a reformer, than a modern version of Soviet Man: and there remains a yawning disjuncture between his sweeping arms control declarations and the rigidity of the Soviet negotiations in Geneva.

This puzzle may have an innocent explanation: perhaps radical reductions in nuclear weapons were not what the Soviet bureaucracy had in mind as recently as nine months ago; translating the vision of the boss into a negotiating strategy may be proving an uphill struggle; and (*as if coincidentally*) there seems to have been a significant reshuffle of key foreign policy personnel within the bureaucracy, and from the Foreign Ministry to the Party Secretariat.

In any case, suspicion is no reason for the West to confine itself to worst-case analysis. The state of the Soviet economy, and the unpredictable costs of a new arms race, offer compelling logical reasons for Mr Gorbachev to seek calmer international relations in general, and some re-affirmation of the notion of arms control in particular.

The worst thing about President Reagan's threat to break the Salt II limits is that it makes him hostage to, and may influence in counter-productive ways, a Soviet decision-making process which may still be absorbed in the gestation of policy. In particular, it focuses a more urgent light on the *Geneva negotiations, which have* remained at the starting gate for nearly 18 months. There is no way the Russians are now going to respond to the US accusations, because that would be *to admit that they have*, after all, been cheating all along. Not all America's allies endorse the severity of Washington's complaints; not all of them have access to the full US intelligence; *even if they have, not* all of them are convinced that the Soviet violations merit an open challenge to the legitimacy of the Salt II treaty.

The US charges boil down to three main cases. The Russians are encoding missile test signals to prevent US monitoring; they have built two new types of missile when only one is permitted; and they have built a radar of a type and in a location *forbidden* under the 1972 ABM treaty.

The Russians may be guilty of the first; but the Salt ban on telemetry encryption is wholly imprecise. The Russians claim that one of their new missiles is a permitted modernisation of an old type — though that seems dubious. Only the Krasnoyarsk radar seems a clear violation. But *whatever* the rights and wrongs, it seems inconceivable that Mr Gorbachev will dismantle the radar or destroy a new missile type.

In *political terms, therefore*, there is no direct solution to the compliance challenge laid down by Washington: it can only come by shifting the terms of the debate from the old agenda to the new. If the Russians want to rescue themselves and the Americans from the retaliatory ratchet President Reagan is now hooked *on*, they really must get their Geneva negotiating act together.

There is no point in Mr Gorbachev banging on about a comprehensive nuclear test ban, or demanding the planned obsolescence of the British and French nuclear forces; these propositions have simply no chance of being negotiated with existing Western governments. If he is serious about arms control, he will start negotiating seriously on issues where there could, in principle, be room for negotiations. Like, for example, a big reduction in strategic nuclear weapons, or the reduction/elimination of Euromissiles; at *least*, *these* are objectives which both superpowers *say* they share.

Real progress in Geneva now would have two advantages, on top of its intrinsic attractions: it would create conditions for a successful second summit at the end of the year; and it should serve to head Mr Reagan off from any further damaging breaches of the Salt limits. Conversely, additional retaliation by the US, however symbolic, can only undermine the Geneva prospects.

Which brings us back to the verification problem. If there is no effective way of resolving the compliance problems of the past, it follows that this Administration will be much more picky about definitions and verification in any new treaty. The difficulty is that arms control *is impossible to police* with certainty, and impossible to enforce; it is not an event but a process. If the US aim were absolute certainty of compliance, with the letter of a treaty, it would be setting *self*-defeating standards of perfection: treaty definitions which claimed to set a dam against evolving technology, verification methods going far beyond the inferential limits of satellite spying. Both are unattainable.

In any case, such standards are unnecessary. Effective arms control only requires *enough advance warning* of violations which risk becoming *militarily significant*, to give the opportunity for counter-measures. By this standard, the impact of Soviet violations, though possibly serious symbolically, looks modest in practice; if this is the worst, US verification capabilties seem adequate, even in the face of Soviet coding.

But there is a serious problem. The deep reduction *proposals* ostensibly on the table in Geneva would have far-reaching implications for Nato *strategy* and for the defence *postures of the* European allies. Is it any longer acceptable that the compliance policing of such an arms control process should depend solely on a superpower whose judgments and interpretations may well be distorted by prejudice? The US has long charged the Russians with having used acid rain in South-East Asia, but the evidence is disputed by Canadian and British research.

What will be required in future will be more verification independent of the two superpowers. Mr Gorbachev seems to have moved in this direction with his offer to let non-governmental US scientists monitor nuclear tests in the Soviet Union—though it casts a curious light on his campaign for a test ban. But satellite verification is obviously beyond the reach of individual scientists. So if there is to be independent monitoring of arms control, it can be undertaken only by countries which are highly industrialised and have the biggest stake in arms control: that means Europe.

Lombard

Tactics in the new TV contest

By Carla Rapoport in Tokyo

THE JAPANESE are at it again. This time they are trying to force a new kind of television down the throats of the rest of the world. What kind of television is it? A better one.

High-definition television, for those who have seen it, is not a gimmick. Its uses a transmission, *system of 1125 lines*, more than twice that used in the American standard television. The picture is nearly as sharp as a good photograph and the *difference between HD-TV and* standard TV is easy to see even from a distance.

The Japanese have been working on HD-TV for nearly 15 years and now have working models of it dotted around Tokyo. Cynics say HD-TV is just a plot to get consumers to throw away one product and buy another. But how sentimental were consumers about junking their black-and-white televisions for colour? Or what about the thousands of standard typewriters that went out of the window when electrics and then electronics appeared?

The Japanese say their HD-TV system is more advanced and better than anything the Europeans can put together. They also say they would like to work together with European companies on sharing their HD-TV technology. Unfortunately, Europe does not believe any of this and as a result, managed to block the adoption of the Japanese HD-TV system at the latest meeting of the body which sets the standards on these things.

As the world consumer electronics industry is now all but *based in Japan, it might be a* good idea for Europe to think again. Behind HD-TV is a long list of innovative, attractive products which the Japanese will be rolling out over the next few years. *By the end of this year*, they will be introducing digital audio tape (DAT), for example, a product which offers sound quality equal to compact disc but can both erase and record music. *Some are already* suggesting that DAT will make conventional audio tape obsolete. Even so, standards on DAT players have yet to be resolved.

Also down the line is the development of the compact disc technology. This is a potentially revolutionary field which could provide all kinds of wizardry in office automation and home appliances. So-called interactive CDs, for example, could display the streets of Tokyo to a bewildered driver on a small screen in his car. In this area, Philips and Sony have already forged a specifications agreement, the kind of pact which may help reduce some of the chaos later on.

Like most consumers, I look forward to all these gadgets with enthusiasm. Interestingly, the Americans and Canadians have backed the Japanese proposal for high definition television. North Americans, too, are avid consumers who are increasingly happy to see their goods designed *in Japan* and made by Japanese companies in their home countries with home-grown labour.

The arguments for re-building the European computer electronics *industry* are *well-known* and respectable. However, the Japanese cannot be stopped from thinking up products that a lot of the rest of us want to buy. What the Europeans managed to *stymie at the recent* international standards meeting will not disappear. The debate, on whether Europe can work with the Japanese in consumer electronics, has only been *delayed*.

And that delay could be a crucial one. Japan's BBC equivalent, NHK, has decided to start broadcasting with the high-definition television system *by 1990. As a result*, Japanese television manufacturers are already gearing up to build HD-TVs which will be attractive in terms of price and quality. This game will be open to all comers and, *judging by past* experience, will be a tough one. All it will take is one Ted Turner-type to decide to start broadcasting on the new HD-TV system in English and the Japanese will be ready to supply his viewers with their new sets. It has a familiar ring . . .

Letters to the Editor

Middle East situation

From Professor Zeev Hirsch

Sir,—Given the complexity of the Middle East situation it is perhaps not surprising that Mrs Thatcher's recent visit to Israel did not bring about an immediate breakthrough. Bearing in mind the possible consequences of another Middle East flare up, there is ample reason to continue with the efforts to achieve a settlement despite the seemingly disappointing outcome of Mrs Thatcher's visit. Before considering yet another initiative, British and other western policy makers might pause to reflect on the reasons for past failures.

In the past, British and European involvement in the Middle East peace process consisted of offering both sides unwanted advice. The Arabs were told that they should recognise Israel and accept the existence of a Jewish state in their midst. The Israelis were told that occupation of the West Bank and Gaza must end and that *they should hand over* these territories to a government dominated by the Palestine Liberation Organisation which should be recognised as the sole legitimate representative of the Palestinians. This advice, formerly embodied in the Venice Declaration of 1983, was unhelpful not only because it ignored Isarel's major concerns but also because it failed to recognise the complexity of the Palestinian predicament and its implications for Israel, Jordan and the Palestinians themselves.

If the PLO's claim to be the sole representative of the Palestinians is accepted, it must extend to the Hashemite Kingdom of Jordan where over 60 per cent of the population is of Palestinian origin. This is clearly not the outcome which the initiators of the Venice Declaration had in mind. They presumably intended to voice European support for a PLO-dominated state in the West Bank and Gaza annexed by Jordan in 1949 and ruled by it until 1967. Is it not reasonable to assume that, if asked, a majority of the Palestinians would opt to be governed by a single rather than two governments—one dominated by King Hussein and the other by Yasir Arafat? Does a second Palestinian state, sandwiched between Israel and Jordan, make political and economic sense? Resolution of the Arab-Israel conflict must address these difficult questions while providing an answer to Israel's security concerns. *It cannot be seriously* claimed that the approach represented by the Venice Declaration satisfied these requirements—hence its failure.

Viable peace in the Middle East must be based on mutual recognition of rights; Israel's right to secure borders and Palestinian rights to nationhood; that is, the right to have their own government and their own territory.

A new peace initiative, based on these principles is likely to be welcomed by moderate Israelis and Palestinians, even though, or perhaps because, it leaves it to the parties themselves to work out the exceedingly difficult question of how their partly conflicting rights might be reconciled. To enjoy a better chance, the initiative should go further; it should contain an offer of support for an economic development programme encompassing the whole region which would be conditional upon acceptance of the idea of peace and which would promote projects which, in time, could form the basis for regional interdependence and economic co-operation.

As recently as four decades ago, when Europe was emerging from a most awful war, only rare persons of vision such as George Marshal and Jean Monnet fully understood how economic and political processes can reinforce each other to promote peace between seemingly irreconcilable enemies. Today, *western Europeans who* were so well served by these ideas take them for granted. They might do themselves and their fellow men an immense service if they sought ways to share *with the people of the Middle* East, most of whom have never experienced peace in their lifetime, some of their knowledge concerning the interaction of politics and economics in the *process of* transition from war to peace.

(Professor) Zeev Hirsch,
Trade Policy Research Centre.
1 Gough Square, EC4.

Spending on the NHS

From Mr C. Jex

Sir,—How is it that the Government can truthfully proclaim that spending on the NHS is higher than ever "in real terms" and yet the NHS is starved of funds?

The answer is in the definition of "in real terms." The use of the retail price index to adjust cash spending for inflation is wholly inappropriate to the costs of running a hospital or a University or a school. If a simple economic statistic must be used then an index of wages would be more appropriate than RPI.

In these terms the recently announced university cutbacks of "2 per cent in real terms" are more like 4 per cent or 5 per cent and even the top of the league Warwick University is suffering flat funding or a small cut, whereas bottom of the league establishments have to contend with 5 per cent or more.

The Government has not suffered from poor presentation, quite the reverse, presenting cutbacks as expansion (in the case of NHS at least) must be deemed to be brilliant presentation. No, it is the Opposition parties and the media who have suffered from poor presentation in allowing the Government to get away with such a blatantly inappropriate definition of "in real terms."

Colin F. Jex.
Hare Hill,
Church Hill,
Arnside, Cumbria.

The future of the water industry

From the General Secretary, National and Local Government Officers Association

Sir,—The expressions of fears on the part of senior officers of the Water Authorities Association and of *the CBI (May 23) regarding* the future of the water industry are welcome in underlining the absurdity of key elements in the Government's privatisation plans, and the fact that in its indecent haste to finance pre-election income tax cuts the government has simply not done its homework.

We agree with the WAA that to have the industry run through several different bodies constituted in at least three different ways, as would inevitably arise from setting off one authority at a time, would lead to chaos. For several *reasons, it is essential that* the industry retains its united national framework. The problem for the Government is that, because of their vastly differing liabilities — both financial in the form of indebtedness and physical in the form of decaying water mains and sewers — the authorities cannot be sold off all at once. Some of them simply are not marketable.

For the same reason, the CBI is right to point out the absurdity of imposing a crude price regulator on all the privatised authorities regardless of their *circumstances*. This would lead to the healthier ones raising prices more than they need to while those at the other end of the scale would be unable to make ends meet. *Leaving* privatised authorities to their own devices however, would clearly open up the public to even greater dangers.

The fact is that neither the WAA nor the CBI can have it both ways. The problems they have pointed to are inherent in the Government's legislative proposals and the only way to resolve them is for the Government to admit that in its haste it has not thought out its plans, which should be withdrawn.

The WAA's reference to the *prospect of some* companies, still government owned, co-existing with some that are still constituted as at present and some that are fully privatised begs one highly contentious *question. This is that the* water authorities may well not be government-owned as it is, and, indeed, according to no lesser authority than the Prime Minister herself, in a written answer they are not nationalised. Wyn Roberts, Welsh Minister, also described them as publicly owned but not state-owned. In these circumstances, it is not surprising that more than one local authority is actively examining the viability of legal action for compensation for assets transferred to water authorities in 1974.

Prudent investors would be well-advised to do as we are suggesting the Government should do and keep their hands off water.

John D. Daly.
1, Mabledon Place, WC1.

Stop litter louts

From the Deputy Leader, Westminster City Council

Sir, — Westminster City Council is 100 per cent behind Mrs Thatcher's "clean up Britain" campaign.

We have already been successful in this field, with our cleaner city campaign, launched six years ago, providing a working model which other authorities, both at home and abroad, have copied.

But what is really needed to stop the litter louts is tougher legislation. Westminster wants on-the-spot fines replacing the ineffective powers we currently *have to deal with this problem*.

It works in Singapore, why not London?

(Councillor) David Weeks,
City Hall,
Victoria Street SW1.

Pronouncing hybrid words

From Dr J. Scutt

Sir,—I refer to the letter from Mr Edmonds (May 24). Units of measurement are a special case because the prefix specifying a particular multiple or fraction of the basic unit is independent of what follows. Thus kilo should always be pronounced as in kilogramme, kilowatt, kilonewton, etc. To rhyme kilometer with gasometer is an aberration!

J. E. Scutt (Dr),
University College, London,
Gower Street, WC1.

FINANCIAL TIMES
Monday June 2 1986

Terry Byland on Wall Street

Banking on a second half boom

LAST WEEK'S surge to new peaks in the Wall Street stock markets has sent many brokerage analysts back to the drawing board to search for explanations of the sudden shift and for clues to the outlook.

The first puzzle is that stocks moved upwards in direct defiance of a weak bond market. Investors took the view that, even if interest rates should rise, a strengthening US economy bodes well for corporate profits and therefore for stock prices.

The unexpected leap of 1.5 per cent in April economic indicators puts some firm backing behind investors' hopes that the delayed rise in corporate earnings will come through in the second half of this year. Since the setback to around the Dow 1,770 mark largely reflected disappointment with first and second-quarter corporate profits, last week's recovery reinstates the importance of the outlook for the second six months of the year.

But the bearish signal on interest rates, which ignored renewed weakness in crude oil prices, implies that not all stock sectors will be equally blessed. The progress of the technology and mainline manufacturing issues were clouded last week by heavy gains in IBM on the back of the stock buy-in plans.

But the brokerage analysts were turning their clients towards the retail and consumer stocks, which can usually move prices quickly upwards if rates turn against them. At the same time, a strengthening economy will mean more jobs and more money in the pockets of the customers at the supermarkets, food stores and petrol stations.

Department stores have already enjoyed a significant advance on the back of the latest trading news from J. C. Penney, Woolworth and other big names. Now the spotlight has turned to the food stocks, which had been overshadowed by the Beatrice Group saga, featuring, in succession, poor earnings, a corporate upheaval and then a management buyout.

Stock	Current p/e	52-week price range
Dart & Kraft	18	59¾–31
Pillsbury	18	81–45
Sara Lee	16	64–37
S & P 500	16.09	n/a

With disinflation likely to keep commodity prices down and the US farm industry prostrate, the outlook for the food manufacturers and retailers seems bright.

Earnings predictions for food manufacturers well outpace those for the rest of the market although stock prices have yet to reflect this bullishness on the sector.

Pillsbury, through the strength of its food manufacturing side as well as its Burger King restaurant division, appears to be heading for a 50-per cent increase in sales to around $3bn this year and could double that growth over the rest of the decade.

Sara Lee leans heavily on the beef and pork side of the US menu, which has been losing popularity in a health-conscious America. But there are signs that the trend is levelling out, and the industry is beginning to enjoy the benefits of the lower wage structure wrenched from the unions during the bad times. Moreover, Sara Lee is backed by its success in selling branded clothing – Hanes hosiery, Aris Isotoner gloves and Coach belts – which give a high return on sales. Analysts' forecasts for Lee vary a little, but mostly on the optimistic side. Earnings could rise by 11 per cent this year, and a further 14 per cent next year.

Dart & Kraft has proved more of an enigma. its stock price has outperformed the rest of the market – gaining more than 60 per cent while the Standard & Poor's 500 gained 57 per cent. Yet its non-food sides have lain under a cloud, particularly the Tupperware and the Duracell battery divisions. Since Tupperware suffers when the economy improves, because of the difficulty of finding suitable part-time sales representatives, the problem is not easily solved. The stock price has been helped since March 6 by the plan to buy in 10m shares. On straight earnings prospects, Dart & Kraft is less attractive than the rest of the sector.

Even after the activity of the past week, the food stocks appear undervalued against the rest of the market. Several of the stocks mentioned are now above their 52 week peaks. But that is unlikely to hold them back as investors appreciate their prospects of advancing in a market where the heavy industrial issues may not be able to maintain their sudden recovery.

EMPLOYERS SEE UNEXCEPTIONAL IMPROVEMENT IN OUTPUT

UK economic recovery held back by high pay

BY ROBIN PAULEY IN LONDON

BRITISH industry's competitiveness is being eroded by rising unit labour costs caused by persistently high pay settlements, the Confederation of British Industry, the employers' group, says today.

Wages which are more responsive to the falling rate of inflation coupled with further cuts in interest rates are needed to help companies improve competitiveness and win back their market shares, says the organisation in its latest economic situation report.

It expects a very modest recovery of manufacturing output during the summer, and its monthly trends inquiry, also published today, underlines that the improvement is likely to be unexceptional, returning only to the levels of output of last autumn which subsequently collapsed during the winter months.

However, an analysis of the world economy published today by the London Business School says that stagnating output has also been experienced in the other main industrialised countries, all of which can now expect rapid growth as the benefits of lower oil prices feed through into their economies.

Lower oil prices are already starting to be reflected in the CBI surveys with fewer companies expecting to increase their prices over the next four months as fuel, other raw material and import costs all fall. But the CBI concurs with the LBS analysis, saying: "The benefits to economic growth of lower oil prices have yet to be fully seen."

The CBI says a quarter of the companies surveyed expect to increase their output in the next four months while 60 per cent expect output to remain unchanged. A balance of 16 per cent of companies report their order books to be currently below normal. This is the worst figure recorded in a monthly survey since November 1983 although it is an improvement on the figure recorded in April's quarterly survey covering the poor first quarter of this year.

Similarly, the balance of firms reporting export orders to be below normal is, at 9 per cent, much better than the first-quarter figure of 20 per cent but close to the March monthly figure of 7 per cent, suggesting the trend in export orders is almost flat.

Mr David Wigglesworth, chairman of the CBI economic situation committee, said the improvement in output, while welcome after a winter which was disappointing for many sectors, was still patchy.

"In spite of the depreciation of the pound against other European currencies in the last few months, export order books have not improved significantly. The cuts in interest rates should help to stimulate activity, but the real cost of borrowing in Britain is still too high compared with our major industrial competitors. We are looking for even lower interest rates to help us improve our competitiveness, win back market shares and thereby create more jobs."

But the economic situation report also adds that, because UK wages appear less responsive to falling inflation than for most of the major competitor countries, relative unit labour costs continue to rise in the UK and competitiveness declines. "Compared with the same period a year ago the CBI competitiveness index for the first quarter shows a fall in competitiveness of 11 per cent."

Nevertheless it concludes on the same positive note as the LBS: "The boost from oil and interest rates will cause output to revive and growth to accelerate into 1987."

London Business School analysis, Page 16

Wells Fargo plans 5,000 job cuts after Crocker takeover

BY PAUL TAYLOR IN NEW YORK

WELLS FARGO, the San Francisco-based banking group which completed its $1.07bn purchase of Crocker National from Midland Bank of the UK on Friday, plans to reduce the combined banks' 26,000-strong workforce by 5,000 over the next two years – starting with 1,600 immediate layoffs.

The group said the reduction of almost 20 per cent in the workforce would be accomplished in part by attrition. The job cuts, which are likely to fall hardest on Crocker's 12,000 employees, are in line with earlier estimates and are seen as confirmation that Wells Fargo intends to cut costs aggressively in its integration of the two banking units.

Wells Fargo said that displaced employees would receive 30 days' notice. Crocker's workforce has been bracing itself for layoffs ever since the deal between Wells Fargo and Midland was announced earlier this year.

The US banking group also estimated that 120 of the combined group's 623 branches would be consolidated within the next 12 months. The integration process is likely to stretch into 1987 but work will be carried out over the next few months to combine the merged group's 1,200 automated teller machines, customer accounts and other products and services.

Based on end-March figures, the combined group will have $48.5bn in assets – ranking it as the 10th largest banking group in the nation. However, Wells Fargo has already announced plans to shrink its balance sheet assets by around $6bn, mainly through reductions in deposits placed with other banks and holdings of government securities.

As expected, Midland Bank also confirmed that it was to retain Crocker's primary bond dealership, together with certain municipal bond business and related safe custody operations. Midland Bank's Thomas Cook travel and financial services subsidiary will retain Crocker's wholesale foreign banknote business. The two banking groups said consideration for these transactions equated to book value for the retained assets.

World Cup up and running

Continued from Page 1

with a stick at Christmas to unlock the store of sweets – opened up a hail of sparkling confetti in Mexico's national colours from the open roof of the stadium, shimmering in mid-air before carpeting the sidelines.

But the crowd was the main protagonist of the spectacle. Ten minutes after satellite transmission came on, as the arrival of President de la Madrid was announced, the crowd let rip a deafening chorus of jeers. Worse was to come. When Mr Joao Havelange, president of Fifa, the international football federation, gave his welcoming address, he had got halfway through his ceremonious mention of the Mexican president when he was drowned out by catcalls.

Mr de la Madrid's inauguration message, which took peace as its theme, was rendered totally inaudible by a one-minute long, cathartic howl from the stadium, as assembled officialdom stood whiteknuckled and powerless.

This act of repudiation is unprecedented, not least because the President and his ministers invariably appear before pre-selected crowds and audiences.

Reagan urges action on extradition treaty

BY NANCY DUNNE IN WASHINGTON

PRESIDENT Ronald Reagan urged the Senate at the weekend to ratify a US-British treaty which would require American extradition of all fugitive terrorists.

Clearly seeking to repay Mrs Margaret Thatcher, the British Prime Minister, for her support against Libyan terrorists, President Reagan blasted efforts by some senators to exempt the extradition of some terrorists involved in military attacks.

"Some members of the Senate Foreign Relations Committee have gone so far as to prepare a substitute treaty permitting those who have murdered British policemen and soldiers for so-called political reasons to avoid extradition," Mr Reagan said. "This substitute is not a compromise. It's a retreat. Its passage would be a victory for terrorism and a defeat for all we have been trying to do to stop this evil."

Speaking in his regular weekly radio address, the President warned that "any rejection of the treaty would be an affront to British Prime Minister Margaret Thatcher, one European leader who at great political risk stood shoulder to shoulder with us during our operations against Gadaffi's terrorism."

The extradition treaty is intended to replace a current treaty which has allowed some Irish terrorists to find refuge in the US on the grounds that their crimes were political. Supporters of the measure hope to get it through the Senate committee this week and on to the floor. Passage has, however, been hampered by some Democratic senators, representing large Irish-American constituencies, who have tried to weaken the proposed treaty.

Concern about the treaty has also been raised by Republican Senator Jesse Helms, who worries that it will set a precedent to force the extradition of fugitives from Communist regimes. "We can never permit that to happen," the President said.

He seemed determined to push the treaty through by focusing on unnamed senators whose actions, he warned, would cause "irreparable damage" by giving safe haven to terrorists "who have kidnapped, killed or maimed people in Britain."

The Administration is particularly obliged to Mrs Thatcher, not only for her support on the Libyan air raid, but for her insistence on a strong statement on terrorism at the Tokyo economic summit.

World Weather

		°C	°F			°C	°F			°C	°F			°C	°F
Ajaccio	S	20	68	Dubrovnik	F	20	68	Malta	S	24	75	Rhodes	S	26	79
Algiers	S	23	73	Edinburgh	C	15	59	Manchester	C	13	55	Rio de J'o	R	18	64
Amsterdam	C	13	55	Faro	S	23	73	Manila	S	32	90	Rome	F	20	68
Athens	C	24	75	Florence	F	20	68	Melbourne	C	13	55	Salzburg	F	13	55
Bahrain	S	35	95	Frankfurt	F	17	63	Mexico City	–	–	–	San Francisco	C	16	61
Bangkok	S	35	95	Funchal	S	20	68	Miami	C	28	83	Seoul	C	25	77
Barcelona	S	28	88	Geneva	S	17	63	Milan	S	28	82	Singapore	F	31	88
Beirut	S	26	78	Gibraltar	C	19	66	Montreal	C	25	76	Stockholm	F	19	66
Belfast	C	13	55	Glasgow	C	13	55	Moscow	S	27	81	Strasbourg	F	16	61
Belgrade	F	19	66	Guernsey	C	14	57	Munich	R	12	54	Sydney	S	18	64
Berlin	F	14	57	Helsinki	C	18	64	Nairobi	C	32	90	Taipei	–	–	–
Biarritz	C	15	59	H. Kong	C	29	84	Naples	S	22	72	Tangier	S	22	72
Bombay	–	–	–	Innsbruck	C	13	55	Nassau	S	30	86	Tel Aviv	S	27	81
Bordeaux	C	15	59	Inverness	C	15	59	New Delhi	S	32	90	Tenerife	F	22	72
Brussels	R	12	54	Islamabad	F	16	61	New York	C	28	82	Tokyo	S	26	79
Budapest	R	11	52	Istanbul	S	28	82	Nice	S	19	66	Toronto	R	21	70
B. Aires	F	18	64	Jakarta	C	31	88	Nicosia	S	30	86	Tunis	S	21	70
Cairo	S	32	90	Jersey	C	16	61	Oporto	S	24	75	Valencia	S	22	72
Cape Town	F	16	61	Jo'burg	S	22	72	Oslo	S	15	59	Venice	S	18	64
Caracas	C	28	82	Lima	C	21	71	Paris	C	14	57	Vienna	S	15	59
Casablanca	F	23	73	Lisbon	S	28	82	Peking	F	30	86	Warsaw	F	15	59
Chicago	S	30	87	London	C	15	59	Prague	F	15	59	Washington	S	24	75
Cologne	C	17	63	Los Angeles	C	25	77	Reykjavik	C	8	46	Zurich	S	16	61
Copenhagen	F	16	61	Luxembourg	F	15	59								
Corfu	F	24	75	Madrid	S	22	72								
Dallas	C	19	66	Majorca	S	21	70								
Dublin	C	17	63	Malaga	F	21	70								

Readings at mid-day yesterday:
C-Cloudy D-Drizzle F-Fair Fg-Fog H-Hail R-Rain S-Sun Sl-Sleet Sn-Snow T-Thunder

EEC to impose dumping duties

Continued from Page 1

in Europe. In a recent development, a Japanese supplier, Minolta, bought a controlling interest in Develop.

Rank Xerox, which now handles all manufacture of Xerox's line of mid-volume copiers, was backed in the anti-dumping action by its parent based in Stamford, Connecticut. "The top management of Xerox gave its concurrence ... because in its view the Japanese were trading unfairly in Europe," said Mr William Glavin, deputy chairman of Xerox. The company added it did not expect that its Japanese affiliate, Fuji Xerox, which supplies all Xerox low-end machines, would be found guilty of dumping.

Stora and Aga cash in hydro electric interests

By Kevin Done in Stockholm

STORA, Sweden's leading forest products group, and Aga, the Swedish industrial gas group, both announced deals to sell off their hydro-electricity assets to a group of institutions including pension funds and insurance companies in transactions that will raise around SKr 7.5bn ($1bn).

Stora will receive about SKr 6bn net for the sale of its hydropower assets to a new company, Kopparkraft, in which it will be the 51 per cent majority shareholder.

Other shareholders in Kopparkraft include the Skandia, Folksam and SPP insurance companies, the Co-operative Pension Foundation, the labour market insurance funds and the national pension fund.

Stora, which will have an option to buy back the power stations in 1998, will continue to run the plants and will purchase all the power at cost price.

The so-called "partner financing" deal offers Stora a big boost in liquidity which will help support its current ambitious restructuring and investment programme. "It is a way of getting hold of cheap money," said Mr Bo Berggren, Stora chief executive.

The strengthening of its finances should result in an improvement in group profits of some SKr 250m (after financial items) on an annual basis.

Stora took on a heafy debt burden with the takeover a couple of years ago of Billerud, one of its rivals in the forest products industry, and it is also investing heavily in new plant with planned expenditure of around SKr 1.2bn this year.

It is planning a new 220,000 tonnes a year newsprint machine to be commissioned in 1988. The investment will increase its total newsprint and magazine paper capacity to some 615,000 tonnes a year.

In a similar deal, Aga said its subsidiaries Uddeholm and Vaermlandsenergie would raise around SKr 1.5bn through the sale of most of their hydro-electric power assets. The Aga companies will maintain around 10 per cent of the capital and just under 50 per cent of the votes in the new company, with the rest held by the same group of financial institutions.

Aga said the deal should lead to an improvement of around SKr 100m a year in group profits although it would only have a minor impact in 1986.

For the financial institutions the deals chiefly offer a secure capital investment that is protected against inflation, said Aga. In both cases PKBanken acted as broker.

West's space effort hit by Ariane loss

Continued from Page 1

Last September's failure – which embarrassingly coincided with a visit by President François Mitterrand to Kourou – was also caused by a third-stage ignition fault. A previous failure in September 1982 was also the result of a defect in the third stage.

Mr d'Allest said he remained confident in the principle of the liquid oxygen-hydrogen engine in the third stage of the rocket. He announced that a committee of inquiry would report by June 30 on why the accident happened. This raises the possibility that fundamental changes to the third-stage design may have to be carried out if the causes of the September and latest mishaps are found to be linked.

Apart from throwing international satellite owners into confusion over future schedules, the weekend accident will also push up further the cost of launching. Insurance premiums to cover satellites have already risen sharply in the wake of the series of aerospace mishaps in 1985–86, reaching 30 per cent of the cost of a launch in some recent cases. Faced with these prohibitive rates, many satellite owners have been declining to insure their spacecraft.

The Intelsat craft was, however, insured at a relatively low premium under a long-standing contract.

The latest Ariane casualty also comes at a difficult time for Société Européenne de Propulsion, the French state-backed company which makes the Ariane engines. Mr Roger Lesgards, the chairman, has just been served with notice of dismissal by Snecma, the state-owned aero engine company which is SEP's main shareholder.

THE LEX COLUMN

Crossroads on the rand

The 10th anniversary of the Soweto riots falls this month and will be marked in different ways. Whatever happens in the black townships or white enclaves this time, the banking parlours of the City will commemorate a decade in which the South African experiment well and truly fell to bits. Leaving aside a gold-induced boom at the turn of the 1980s, the South African economy has refused to grow faster than the black population it now wants to satisfy. Foreign capital, on which the state was nurtured, has dried up. And domestic wealth has dwindled away, first into maintaining a bloated bureaucracy and now into dismantling or escaping it.

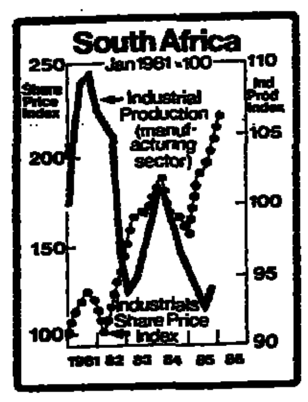
The plea by the South African authorities that only foreign capital can finance the cost of reform begs many questions. It may be that foreign capital did not create the apartheid system, but it earned its return behind the human and tariff walls that were part of the system, and these have ruptured. As this month's mine negotiations will undoubtedly show, black labour is not the cheap and docile input of yore.

In the genuine prosperity of the 1981 gold boom, reform was not exactly the order of the day; if South African business again became able to meet its working capital needs in dollars, attitudes might well revert. President Botha may have shown his commitment to reform by risking fissures in his Afrikaner constituency, but the new uncertainty in white politics makes internationally saleable reform that much more problematical.

Creditors

The creditor banks have got themselves, or been forced by shareholders, into a fine old muddle. In abandoning financial ratios – and South African debt service cannot have been much more than 10 per cent of export earnings – they have placed their cross-border loan book at the service of a black community which they scarcely know and cannot predict. If the townships want a Leninist Azania and do a Lenin with the country's pre-revolutionary debt, the banks will only have themselves and their shareholders, from churches to American tax-exempt funds, to blame.

It could be that change will be managed peaceably. Given a period



of political calm, there could be a net repayment of debt until an equilibrium is reached; but the very length of the reform catalogue under discussion gives an implausible air to proceedings. Banks and foreign companies want conditions in South Africa where business can be profitable but does not carry a political hangover. Who knows whether the release of Mr Nelson Mandela or the repeal of this or that bit of apartheid will satisfy the communities in South Africa so as to create these conditions?

Debt

The current outlook is not good. No doubt South Africa can go on servicing debt from the payment surpluses generated by a collapsing currency, but a 40 US cent rand does not leave much over for the purchase of foreign capital goods to spread the basis of prosperity out of the white camp – or indeed leave much for anything except funk outflows. The prohibition of the African Bank from dealing in foreign exchange last week, on suspicion of transferring funds out in commercial rand, was both ironical and tragic. For this was an emblem of a new black bourgeoisie with a stake in a reformed system.

With negative real interest rates, nobody much is going to be saving anyway, and the cash-flow now squeezed into the stock and gilt-edged markets will have room to spare. High growth and high inflation are remedies as desperate as the disease; and the Reserve Bank simply does not have the foreign currency to stem a prolonged run on the rand.

These are quite generous assumptions. Any weakness in the dollar price of gold will raise questions even about debt service; while renewed political unrest is making agreement harder on any level of foreign borrowing above nil. Even if South Africa regains access to term loans for development, these will not be for longer than a couple of years. There are not many takers for gold shares on a five-year payback; there will be no new electricity schemes in South Africa at all if sanctions choke off three-year money.

In the US a congressional ban on new investment will effectively force companies still in South Africa to run down their subsidiaries for lack of any capital beyond retained profits of dubious reliability.

The discount on the financial rand has widened steadily this year to 40 per cent. The market may be as thin as a few million dollars a day. A refined form of bond-washing ruled for a while among those emigrants and death-and-glory types for whom a dirty bond bought in discounted rand, a put option and forward currency cover still left enough commercial rand in profit to justify the trouble; but the Reserve Bank closed the laundry last week.

Discount

Further large-scale disinvestment would make the discount yawn and force those foreign companies still left to think again. A banking operation with a financial rand market value lower than book may not be as tragic as a burned-out factory, but it must be written down all the same. There are auditors to ensure a soft landing for bank shareholders but none for a political system whose goodwill has evaporated.

The financial community must make a decision in an unfamiliar area. There are three possibilities. It can provide the devil it knows with new capital in the hope that he really wants change and can stave off disaster. It can wait until some regime emerges to which it can lend on terms morally acceptable to professional consciences. The markets fear a third possibility. The numbers are suggesting that the financial community will sit on its hands, with its capital written off, until South Africa and half a continent slide away.

FINANCIAL TIMES SURVEY

Monday June 2 1986

THE ELECTRONIC OFFICE

ALTHOUGH a wide range of powerful systems are now available, many businessmen are still showing a marked reluctance to become involved in the electronic revolution — largely because of a misunderstanding of the practical and economic benefits to be derived from a well-conceived office automation plan.

Office automation at the London offices of American Express: the company uses Honeywell electronic systems for a wide range of tasks, including record-processing, the production of complex reports and the transfer of all types of documentation between buildings

IN THIS SURVEY

A trend towards integrated systems

THE ELECTRONIC OFFICE, that wonderland where paper-based routines are to all intents and purposes superseded by advanced information technology, with microcircuitry and visual display screens, is still obstinately refusing to be switched on.

Despite warnings from governments, from office equipment manufacturers and from business consultants that companies which fail to appreciate the implications of modern information technology leave themselves increasingly vulnerable to their competition, all the evidence is that the take-up of office automation is patchy, frequently ill-considered and often unsuccessful.

BY ALAN CANE

Elsewhere in this survey, Peter Knight reports the results of a government-funded road-show in the UK designed to make managers more aware of the business opportunities inherent in information technology.

The manager of the campaign, Gordon Ross, concluded that the take-up of information technology in Britain's offices was nowhere near as powerful as had been thought. There were pockets of excellence, to be sure, but elsewhere there was simply apathy, indifference and ignorance.

There are complex reasons why this should be so when the positive benefits of automation in the office can easily be enumerated.

A decade ago, George Couloris, Ian Page and Tony Walsby of Queen Mary College, London University, produced a perceptive report on the potential for integrated office automation systems that suggested over the 10 years between 1977 and 1987, office information systems would be developed that would gradually replace the desk, the typewriter and the filing cabinet.

That has all come about and rather more rapidly than Couloris and his colleagues anticipated. The desk can now be replaced by the multifunction workstation—a professional personal computer linked to other personal computers via a low-cost, high-speed and very reliable networking system (the local area network or LAN).

The workstation can also be linked to the company mainframe so that the executive can call down and manipulate information from the company records.

Typewriters can be replaced totally by computers equipped to process words as well as figures. Dedicated word processing equipment is slowly giving way to personal computers running word processing software.

And electronic filing is available to replace the paper-filled filing cabinet. It can be magnetic—IBM's mass storage facility for example where tape cartridges are moved by robot arms —or optical like Philips "Megadoc" machine, a grown up version of the digital compact disc player.

Yet with all these powerful electronic systems on offer, there is still a marked reluctance on the part of the ordinary businessman to become involved in the office revolution.

To some extent, the early approaches to office automation were wrong. Early enthusiasts for office automation, aided and abetted by equipment manufacturers whose chief interests, understandably, lay in selling more hardware, were interested in emphasising the productivity gains that could be expected from automation, in much the same way that productivity gains had been achieved using automation in factories.

There was much playing with numbers showing that the capital investment per office worker was very small compared with the same figure for the factory worker.

It quickly became apparent that both the numbers and the concept were wrong. Word processing was the chosen building brick. Word processing computers were available and thanks to companies like Wang which took that aspect of office automation very seriously, word processing software was of a high standard. (Wang no longer likes to be thought of simply as a word processing company, emphasising instead its overall strength in office automation and computing.)

The idea was to start from the clerical and typing staff and move on later to professionals and managers.

A report from Butler Cox, the international information technology consultancy points out: "The approach yielded some early and worthwhile advantages, especially when the organisational set up (typing pools) and the mix of work (bulk standard mailings or repeatedly drafted text in which most of the text remained unchanged) favoured word processing."

The chief benefits of office automation — and these can be difficult to measure as in many instances they are qualitative rather than quantitative — are expected to flow from an integrated approach where information is treated as a primary resource and computer technology used to manage it.

It can result in, for example, new marketing methods. Abbey Life, for example, is one of the top ten life insurance companies in the UK, a position achieved through its introduction of unit-linked insurance. Since 1980, it has offered its sales people a portable microcomputer (an Epson HX20) as a selling aid.

The idea was to complement the information which could be provided by the company's large IBM mainframe computer and to aid and enhance the quality of sales presentations. The company met the cost of program development but the sales people had to buy their own Epson. Over 25 per cent have done so, and the experiment is reckoned a success.

And in the banks and building societies, there is a growing understanding of the importance of "branch processing" — the use of local computing power to assist in the marketing of new and existing services.

Leadership here has come from the US. A recent report on office automation in banking notes: "Banks are thinking seriously of making their branches self-supporting, able to handle all the functions of loan applications and documentation, account opening, investment, brokerage and counselling.

"There will be a growing need for office automation work-stations at branch level as well as at head office — and good communications."

The same report indicated that in the US some 86 per cent of the banking industry had already installed office automation systems of some kind.*

An average of 26 dedicated word processors per 1,000 employees was reported across the organisation surveyed with IBM and Wang accounting for more than 60 per cent of the units installed.

The ratio for professional personal computers was only slightly lower — 21 per 1,000 employees — but 72 per cent of these came from IBM and 9 per cent from Apple.

What the banks were most likely to add soon to their office automation system were private videotex, electronic mail, on-line management information systems with graphics and voice information systems.

An important point which is true both for the US and for Western Europe is that the comparatively piecemeal way in which the banks and financial organisations have tackled office automation means that a large number of suppliers have managed to survive in what is a comparatively narrow market.

With the trend to integrated systems, where most elements of branch automation can be provided by a single source, there may be a corresponding contraction in the number of suppliers.

Nevertheless, there will still be a powerful requirement to "mix and match" equipment from different suppliers on the same site.

That will place new emphasis on the "local area network" a low cost method of connecting microcomputers, printers,

CONTINUED ON PAGE 8

Proliferation of models leads to a technological Tower of Babel

US leaps ahead too fast

AMERICA'S QUICK leap into the computer era has to some degree hindered its ability to take the next step — the electronic office. Computer makers and models have proliferated to a degree that a technological Tower of Babel exists among various languages and incompatible systems.

Most companies now produce their own machines to suit particular operating systems and needs. Even the effort to produce *standards for linking* machines creates battlegrounds of incompatibility: Prime Computer Inc has led the 18-member Spectrum Manufacturers Association in the introduction of standards to allow software to run on different machines.

Ultimate goals

Its standard, however, differs from the International Standard's Organisation's successful European consortium, as well as groups united around AT&T's Unix system and the IBM-led Corporation for Open Systems group with 40 members.

Neither is there any unity on the ultimate goals of the electronic office. The generally accepted notion is to make paper go the way of papyrus into museums of antique civilisations; but Apple Computers touts the professional publishing touch of its Macintosh machine, which would generate heaps more paper, though piled in more elegant and readable bundles.

"Desktop Publishing Plus," Apple's own term for its recently introduced Macintosh Plus computer coupled with the LaserWriter Plus printer and Aldus Corp's PageMaker software, is aimed at churning out "newsletters, contracts, data sheets, overhead transparencies, manuals, memos and forms," according to its advertising for the new product.

Mr John Sculley, chairman of Apple, contends that desktop publishing is "a new emerg*ing market that we think is* going to be very significant and may well shape the 1980s and 1990s the way xerography did in the 1960s." The success of the Macintosh has inspired emulation with the software and additional hardware to reproduce drawings and designs for the IBM system.

Mr Lawrence Kramer, head of the New York-based Kramer Communications, uses the Macintosh to prepare promotional materials "up to camera-ready copy" for his public-relations and promotion clients. Still, he does not see uses, which he defines as "an intermediate level between typed copy and typesetting," as having anything like the impact of Xerox on the office of the future.

Central to the development *of the electronic office is* connecting up computers to allow the transmittal and storage of messages as a substitute for phones, memos and the post. In addition, more efficient use of printers and access to company data require communication hookups known as local area networks. Although networks have been available for 10 years, a breakthrough occurred last October when IBM announced its "token ring" with design standards it is making available to competition to encourage compatibility.

The big rise in office automation in the US has also created battlegrounds over machine incompatability, as Frank Lipsius reports from New York

In 1980 Xerox, Digital Equipment Corp (DEC) and Intel Corp co-developed their own Ethernet system, but DEC and Xerox are intending to use the token ring, along with Apple, AT&T, Data General, Sperry, Wang and Hewlett-Packard, to bring the system a long way toward establishing a generally accepted standard.

Mr Sculley acknowledged that Apple Computers' willingness to make its Macintosh compatible with IBM amounted to "a major change in philosophy" but a necessary one to keep the company competitive in the business market. Mr Sculley believes that besides *its publishing capability,* the Macintosh has a role for executives because of its power and ease of use.

"We think that the serious user of the future . . . is going to go beyond the person who is only interested in heavy-duty computation. The serious users in the future are going to be people interested in sharing information, accessing information, using information, putting together reports, presentations, proposals and things of this nature."

By conceding the general acceptibility of an IBM standard, even for the previously renegade Apple, Mr Sculley helps IBM become the de facto standard for the electronic office.

Still, many obstacles remain. Ms Charlotte LeGates of the *Computer and Business Equipment* Manufacturers Association, notes that "even the meaning of 'compatibility' is not fully agreed upon." A number of personal computers that claim to be compatible with the IBM are 80 per cent compatible so that certain programmes will not run on them.

IBM itself has not yet taken the crucial step of tying mainframe computers into the token ring, which for now will accomodate only the desktop PCs. Besides needing the mainframes to make the network useful, the token ring is of debatable cost-efficiency.

The circuit card that has to be inserted into member PCs costs $800 to $1,500, rivalling the cost of the computer itself. Cable, software and other additional needs raise the price even more.

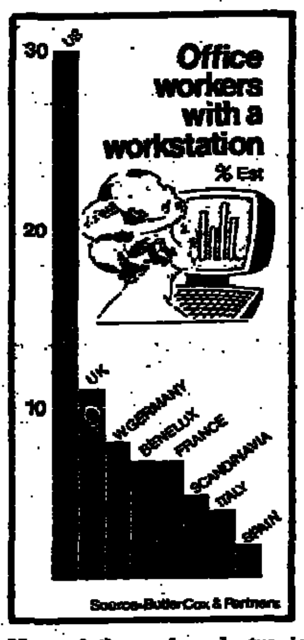
Because of the expense of the electronic office, managers have to weigh carefully the usefulness of the end product, even when it promises to eliminate paperwork forever or give every employee of a far-flung empire access to the desks, if not minds, of every other employee.

When mainframes are tied into the system, companies may have to buy 50 per cent more computing power just to operate it, estimates Arthur Andersen and Co. On average, only about 20 per cent of any information needs to be accessible beyond its original department.

In a study of computers used in about 60 American businesses between 1978 and 1982, Mr *Gary Loveman of the Massa*chusetts Institute of Technology found that while computers increased productivity as measured in corporate sales, they were not as cost-effective as other capital investments. He concluded that businesses may have bought too many computers, though a study of large law firms showed that attorneys with computers could bill as much as 12 per cent more hours because of the greater efficiency produced by computers.

Productivity *is* not the only issue being argued in the proliferation of computers. In his recent book, *Brave New Workplace*, Robert Howard contends that computers centralise control in the hands of managers while undermining the autonomy of the workforce, supplanting motivation with measurable demands from above. As computers become more prevalent in the workplace, their impact on the workforce will no doubt continue to be debated along with the expense and viability of the electronic office.

"Connectability," the buzzword of the electronic office, remains the slogan of visionaries, who admit they await the 1990s for more colloquial usage.



Most of the major electronic office system suppliers are US companies which usually introduce new products in the US before entering other markets. The labour costs are higher in the US than in

TEDIOUS OAC FORUM AT HOUSTON

Potential customers perplexed

OFFICE AUTOMATION is very boring. That is the good news which emerged last month in Houston at the leading electronic office forum in the US, the OAC.

It is good because for the past decade the fast pace of technological change has made many customers dizzy.

"When will it ever stop?" was the question exasperated users used to ask as they fought to keep track of the latest developments—8 bit, 16 bit, 32 bit, multi-user, departmental computing, networked micros, X.400 and Unix.

The choices were, and still are, perplexing. But progress has now slowed to a manageable rate. The industry is maturing *fast*, standards are emerging and small manufacturers are happy to co-exist with industry giant IBM. Most computers look similar in their beige boxes and do the same jobs in roughly the same sort of way. There is little to choose between competing electronic office software which performs the same range of tasks with similar finesse.

An example of the slowdown is given by Lotus, manufacturer of the best-selling 1-2-3 spreadsheet for microcomputers. The company says it will not introduce a major new product until next year. Instead it plans to fine-tune existing lines until the design of personal computers is improved.

Except for those organisations working on artificial intelligence and voice-recognition (still some years away from perfection), most companies are concentrating on enhancing existing products by making programs easier to use, giving more sophisticated graphics, producing ergonomically better designed machines and improving the print-quality of letters and documents.

This might sound boring to those in search of technological excitement, but it is sweet news for the beleaguered office automation managers trying desperately to make the most of their investments. They can now happily ignore the industry's pronouncements for a while and concentrate on more mundane tasks like training their people to make better use of the expensive electronics.

And there is a lot of room for improvement. One of the managers at AT & T Information Systems grimaces when asked about progress at installing office automation in his company. AT & T Information Systems sells computer systems, some made by Olivetti of Italy, in the US. It is using its own machines to provide electronic office facilities.

The manager says it is taking much longer than expected to get the systems working properly. And office workers are, in some cases, not adapting to the new ways of working fast enough.

PETER KNIGHT

Paper-chase tradition dies hard

Japan

ROY GARNER IN TOKYO

WHEN PEOPLE talk of the electronic or "automated" office in Japan they tend to do so tongue in cheek for although the deployment of such devices as facsimile machines, word processors and business personal computers in Japanese offices has been widespread, precious little change has been effected upon traditional, often inefficient, working practices.

The notion of the electronic office is one however, which continues to provide a focus for the activities of equipment makers and has become a popular objective which even the least committed of business companies feels obliged to pursue.

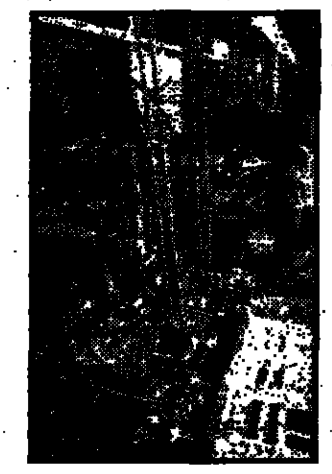
It is widely accepted that ultimately the truly automated office cannot materialise until makers can offer, and users accept, a total systems solution than can be customised to the needs of individual user sites. Cost factors alone, however, dictate that this ideal is unlikely to be realised except in the long term.

A lack of conviction concerning office automation extends even to the major electronics vendors such as NEC, Hitachi and Toshiba. These firms have heavily promoted their automated headquarters, yet in their less conspicuous branch offices the old-style, paper-heavy practices remain. After-sales service for office automation equipment is also woefully inadequate.

It is entirely characteristic that in Japan it was the facsimile machine which quickly became the biggest draw among office automation goods on offer. Its success was owed directly to the ease of its application to a most traditional office custom—the use of hand-written messages for inter-departmental communications; a practice that, ironically, it seems destined to perpetuate.

The facsimile also offers a quick short-cut around another essential barrier to office automation: the keyboard. Not only is the complex Japanese script awkward to manipulate, the keyboard is, unlike in the West, a very recent, almost alien, concept to all but the youngest generations of user.

The great majority of middle managers and above have



Robots helping to produce electronic equipment at Daito City, Japan

already given up on the idea of personally using a desktop keyboard and instead are kept busy devising ways to formulate their office tasks in such a way that junior staff can handle the data processing element.

This outcome is humiliating and alienating for many senior staff and has served to push the dream of the executive work station even further into the future.

As industry analyst Yuichi Murano of Dataquest Japan Inc comments: "Users are very keen on output, but no one wants to deal with input."

The lack of co-ordination in equipment introduction over the past decade is another source of difficulty. Richard W. Sullivan, of the Arthur Andersen consultancy, recalls one Japanese firm which had "bought 150 personal computers from 12 different vendors and of 25 different models," a policy which he says is typical of Japan, where each department makes its own purchase decisions, leading to a fruit salad of equipment.

The poor compatibility of equipment, especially that between computers and communications devices, has been a significant spur to the growth of Japan's Value Added Network (VAN) services market, *worth Y300bn, and set to grow* to Y800bn by 1990.

Software costs were, however, described as "the biggest bottleneck for information-oriented firms" in a recent report by Japan's Ministry of International Trade and Industry (MITI).

The Mitsubishi Bank drew the same conclusion in a recent study which found that 95 per cent of existing business software is custom-built in Japan, notably higher than the percentage in Europe and the US.

The survey highlighted the high cost of developing individual general purpose software, now averaging approximately £300,000 investment for each project and over a year of research work.

One bright spot for manufacturers is that sales of business personal computers has remained steady even at a time when, according to the Japan *Electronic Industry Development* Association (JEIDA), overall personal computer sales for 1985 are expected to register a net decrease for the first time in 10 years.

The situation reflects the fact that Japanese companies are not afraid to make medium-scale investments in office automation, even where cost-effectiveness is very hard to predict. The time *has* not yet arrived, however, when the major investment required for a company-wide office automation policy is acceptable.

Many observers believe that, even in Japan, IBM is the only vendor capable of giving the lead required to move users into such a next-generation approach to the electronic office.

Laggers' indifference overshadows pockets of progress

The UK

PETER KNIGHT

MANY TOP managers in the UK see no difference between office automation and voodoo. Both activities are reputed to give supernatural results and neither is seen as a useful business tool.

Supporting evidence is easy to find. Every year a number of surveys show how managers *fail to see* and *exploit* the potential benefits of information technology (IT).

For example, in 1984 a survey funded by the UK Government and the Institute of Administrative Management showed that business was failing to take advantage of IT and many of those companies that did invest wasted their money. Some 235 senior managers from a wide range of business were *interviewed and the researchers* found that between £4bn and £5bn would be spent on IT that year, of which £800m would be wasted.

The survey, conducted by consultants A. T. Kearney, said that most companies are resisting IT investment, or unsuccessful at using the technology. Kearney deemed these types of businesses as "laggers" and found that they failed to treat IT as a competitive tool.

A year later the Government financed a travelling exhibition to spread the word about the benefits of office automation. Run by PA consulting group *the campaign was called Britain* has IT. After a year on the road talking to 1,500 managers and demonstrating the wonders of office automation at 40 events, PA declared that Britain has not got IT.

"The penetration of IT in Britain's offices is nothing like as significant as we have been encouraged to believe. It is very much a case of pockets of outstanding progress against a *broad background of indifference,*" PA consultant Mr Gordon Ross said at the end of the roadshow.

As background to the campaign PA surveyed chief executives to find out what their attitudes were towards office automation. The results are depressing and rather similar to those of Kearney's.

PA found that:

- The financial sector is using IT to compete more effectively, but manufacturing industry sees it as a tool for administrators and of little use in beating the competition.
- Some senior managers realise that IT can help make their companies more competitive, but they spend more time worrying about how the competition will use it rather than putting the technology to work themselves.
- Most companies treat office automation as a technical problem instead of a means to improve business. Technicians are put in charge of information projects that could benefit from a combination of technical and business skills.
- Some 52 per cent of respondents want the technology to help improve management but only 14 per cent are willing to use these projected benefits to justify the cost of setting up an electronic office.

This, and similar negative conclusions by other consultants, might sound rather familiar and should be put in context. British managers have been hearing how hopeless they are ever since the sun began setting on the Empire. Consultants have provided the sticks in the form of depressing reports with which their clients beat themselves, and the press has rubbed in the salt with disaster headlines.

It might be easy to brand consultant reports as self-seeking, but it is plain that the majority of UK managers are refusing to use IT to make their companies more competitive. The consequences for Britain are as serious as they are obvious.

Businesses which fail to use modern tools will not prosper. But more important, to compete effectively in world markets the British IT industry needs a strong domestic market for its products. It does not have one.

The IT industry in the US not only has an enormous domestic market but benefits from customers who are extremely *willing* to buy and experiment on a scale unthought of in the UK. These producers can, consequently, launch well-tested products on the world market.

The British IT industry, certainly in the area of the electronic office, is ineffectual. There are some small innovative firms which survive but few, if any, make it big. For example, ICL, the UK's only mainframe computer-maker, has just launched an American product as its flagship electronic office offering. Xionics, a maker of networked office systems, has had some successes (including a sale to an American bank) but still struggles to find a broad market.

ITL invented a world-beating workstation which is ideal for executives because it records spoken corrections to documents instead of demanding keyboard skills. But the privately-held company found it difficult to perfect the product and sell it cheaply enough. It has failed to find a mass market.

ICL's One-per-desk system: helping users to exploit the benefits of automation

These and other domestic producers—some no longer trading—*would have an easier* time if UK businesses were not so hesitant. British reticence is an everyday problem for Mr Andrew Kingsley, an electronic office product manager at Hewlett-Packard, a US computer maker with a large presence in the UK. He is in charge of explaining HP's products to customers and training the company's sales team to "talk English to customers, not drench them with acronyms."

Mr Kingsley has trouble reaching the right people within UK businesses. "Many top managers will not expose themselves to the risk of hearing *about new things.* They regard technology as beneath them," he says.

The people, mainly technicians, who are put in charge of finding out about the technology have trouble communicating with their bosses. This makes it even more difficult to convince top management about IT's benefits.

Mr Kingsley and others with less of a vested interest in selling *electronic offices agree that* office automation can improve productivity—but only if the systems and the people who work with them are correctly managed.

"Why do so many organisations still find it so difficult to buy office systems? Is it really that hard to justify the cost or is it the fear of making a decision? Perhaps senior management do not trust their subordinates' judgement—or their own? *Buying a system requires* an act of faith in management's judgement," he says.

And it appears that most, although not all, British managers do not have faith in their ability to extract the benefits from the technology. So exasperated with this attitude is Mr Kingsley that he has started confronting prospective customers. He does not growl at them, but merely asks them to find their faith.

He prepares a demonstration of the technology that concentrates on the business benefits. He also uses the customer's figures to show how productivity can be improved. *He ends* with the assertion that the potential benefits will quickly evaporate unless correctly managed.

The implication is clear: intelligent managers who are confident of their skills will use the technology to win, the spineless will lose. The response is surprisingly positive, he says.

"I usually get a long pregnant silence. The computer manager is embarrassed but the managing director responds. In one situation the European chairman of a large organisation agreed with me. Another time the customers left without saying anything but the following day the information services manager called to say he was horrified at my behaviour and did not understand what I was talking about, but his boss had told him to go ahead," says Mr *Kingsley.*

Mr Ross, of PA, says he has become more pessimistic about British attitudes after completing the Britain has IT campaign, because managers do not necessarily reject IT, but are indifferent.

"All I can say to them is to take it seriously. I can think of no other area that brings as many benefits. But no UK company is spending as much on office automation as they are on company cars," he says.

Growing need for good advice as revolution spreads

France

DAVID MARSH

THE ELECTRONIC office revolution is spreading relentlessly across France, as the country becomes more deeply immersed in the new culture of information technology.

But as the number of systems and opportunities for interconnections offered on the market grows, in almost geometric progression, companies are increasingly aware of the need for advice and consultancy services to help them through the maze.

The French information technology market for hardware systems was estimated last year to be about FFr 50bn; and it is growing at around 20 per cent annually. Computer service activity, however, if recent trends continue, will soon catch up.

The market for software and services, furnished above all by France's high-performing battery of Sociétés de Services et d'Ingénierie Informatiques (SSIIs), but also by the specialised divisions of large hardware companies (with IBM, of course, in the lead), came to about FFr 40bn, and is growing at nearly 30 per cent a year.

A further FFr 7bn is turned over in the multi-user software package area, where French companies have been traditionally weak compared with better-capitalised competitors, above all from the US.

Challenge

French companies, like those in other countries, first embraced information technology in the office in areas such as accounting, marketing and payroll documentation, before applying it to production procedures.

Latest surveys show, for instance, that 75 per cent of small companies of between 10 and 200 staff are now equipped with some form of computer technology, compared with only 19 per cent in 1982.

The real challenge will be for users to make maximum use of inter-connective systems, linking their own computers and terminals to outside databases. The linking of office and production systems, enabling, for instance, designers' changes in production specifications to be fed directly to the machines on the factory floor, is also an area with great potential for expansion.

The picture on the French electronic-office scene varies widely between the large corporations, especially in the financial area which is making increased efforts to bring in sophisticated voice-data communications networks, and the smaller groups struggling to keep their heads above the technological tide.

But one of the strongest influences on the sector as a whole has been the installation around the country of the Direction Générale des Télécommunications (DGT) videotex service which is now the largest and fastest-expanding in the world.

The Minitel keyboard/screen data terminals, given away free by the DGT (which aims to recuperate the cost by 1990 through increases in overall telephone traffic), are now installed in 1.3m homes and offices, with the office sector so far predominating in overall usage. The number of terminals is planned to grow by 1.3m to 1.4m a year until the end of the decade.

Although the Minitel has been criticised by some as a "dumb" animal, needing additional installed electronics to become an intelligent terminal, it has served its purpose by introducing computer culture into even the smallest business.

A range of companies are now engaged in manufacturing and marketing Minitel accessories. For instance, with certain modifications, the terminals can be used to replace completely the need for telex services.

They are also of growing use in businesses concerned with the speedy flow of information. Computer service companies are making a growing living out of devising networks to link up travel agents to central reservation computers, book-shops to publishers, and car dealers to motor companies' spare-parts centres, to assist ordering and improve services to customers.

Profiting

The growing demands of the office-automation field have driven computers and telecommunication companies into a web of alliances, to enable their products to be connected to each other. Thomson, for instance, has striven to make its private-subscriber telephone systems compatible with computers manufactured by Hewlett Packard; Bull has entered into a similar agreement with Jeumont-Schneider.

IBM France, the Sema Metra software company, and the Paribas financial and industrial group are planning a joint venture in furnishing value-added information services to companies, thereby profiting *from an expected shift to* deregulation in French telecommunications.

Although much remains to be done, France has now arguably caught up a large part of its initial lag (compared with the UK) in encouraging professional use of computers. According to the market research firm Intelligent Electronics, 230,000 microcomputers each worth between $1,000 and $10,000 were sold in France last year, up five-fold on 1982. France accounted for 19 per cent of the European market, equal with West Germany and just behind the UK with a 20 per cent share.

According to a report published recently by the Government-sponsored information technology promotion body, the Agence de l'Informatique, which perhaps can be excused for drawing up a somewhat over-optimistic balance sheet, more than 8m French people now use computer technology directly in their homes and offices.

Already, over the past few years, French companies have made great efforts to improve supply in the face of this demand. The success of Bull, after years of setbacks, in finally developing a solid niche for itself in the microcomputer sector is a good example.

The best illustration of how the market is evolving comes from the way the French administration, after the chequered history of the past two decades of intervention in the computer industry, has now more or less abandoned any question of following an industrial strategy in computers.

Instead, the market is growing by itself; and the Government accepts that, rather than through the actions of civil servants, it can best be guided by the 4,500 small businesses in the SSII sector which are estimated to have been created in the last three years.

Office systems policies

● Analysis of US companies with electronic office system policies. All figures are percentages of the full sample

Type of company	Percentage of companies with policy	Scope of the policy: Percentage binding on all levels	Percentage binding on corporate group with guidelines to other levels	Percentage binding on corporate group only	Percentage of companies with no policy
Fortune 500:					
Industrials	59	18	24	9	40
Services	58	26	19	3	39
Medium-sized companies: (over 100 staff)	35	14	9	2	65
Small companies: (10-100 staff)	23	23	0	0	75

Source: Butler Cox and Partners.

Uncertainty in the midst of so much choice

West Germany

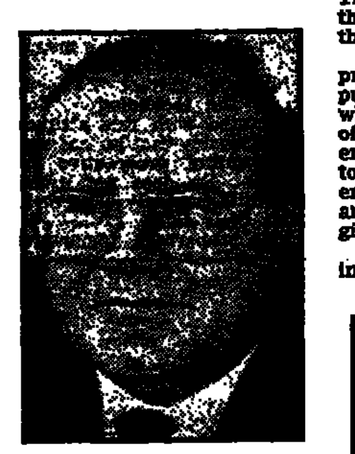
RUPERT CORNWELL

"CONFUSION AMID the cornucopia" is one tempting description of the state of the West German office equipment market—if impressions gained by expert visitors to CeBIT, the country's showpiece office automation and computer fair are anything to go by.

CeBIT, the annual shopwindow of the sector, was held last month in Hanover and it illustrated perfectly the two contrasting faces of the industry as West Germany marches steadily into the era of the electronic office.

On the one hand, there is the ever more glittering wealth of choice open to the customer, as more and more systems and solutions are offered by manufacturers. On the other, an understandable uncertainty prevails over what, and even when, to purchase, given the unresolved haggle over standards, and the long shadow of the *multi-purpose integrated services* digital network (ISDN), promised by the Bundespost from 1992.

Of one thing, however, there is no doubt, the West German market, potentially the largest for data processing and office equipment in Europe, is set to grow vigorously until the end of the decade and beyond.



Mr Martin Bangemann, Economics Minister: anticipating 13m users of microelectronic equipment in West Germany within five years

Perfectionism

In 1985, according to the Central Federation of the Electrical Industry (ZVEI), total demand for data and communications technology products hit DM 36.3bn, and expansion of over 10 per cent — perhaps as much as 20 per cent — is predicted for this year.

The pattern on the office equipment front is uneven: "The big companies are going ahead in any case, despite the problems," says Mr Fritz Jagoda of Diebold, the international management consultants, for information technology, "but the smaller ones are tending to hold back as they always do."

One reason for the latter's hesitation is the innate conservatism and perfectionism which are hallmarks of the German business mentality. "That's all very well," another analyst commented wryly, "but nothing is perfect in office automation."

Another more practical one is the frequent lack of capacity or staff in all but the very large industrial, financial or services organisations to make the installation of a multi-terminal system worthwhile. But few doubt that will change, as computing power, in the office as elsewhere, becomes steadily cheaper and more "user-friendly."

Handelsblatt, the business daily, has calculated that by 1990 one West German office worker in 18 will have his own screen or personal computer, compared with just one in 58 now. *The potential is huge.* Of the near 2m business enterprises in West Germany employing under 50 people, only 7 per cent use terminals and only 3 per cent word processing systems, the Infratest Research Institute has found.

In five years time, Mr Martin Bangemann the Economics Minister said at the opening of CeBIT, 13m people, or half the West German workforce, would have to be able to handle micro-electronic equipment in one shape or another.

As elsewhere in Europe the office automation market — though arguably less completely than other areas of the data-processing industry — is overshadowed by IBM, thanks to its dominant position in mainframe computers, a core ingredient in really big systems. The US giant has tended to use this strength to extend downstream into workplace desktop applications, especially as the trend towards networks gathers pace.

In some respects the picture is changing as the battle over standards intensifies, and communications and data-processing technology draws steadily closer. Telecommunications concerns are stepping up their challenge by trying to build on their strength in the burgeoning PBX (private branch exchange) business. Above all, German suppliers are beginning to mount a counter-offensive, the first fruits of which were on display in Hanover.

Siemens, the leading domestic manufacturer, is, for example, now offering its *HICOM multi-terminal system*, which breaks new ground by allowing simultaneous voice and data/text communications, including electronic mail, on a one-line network for the first time. HICOM may be in its infancy, but it has been tailored to mesh in with the future ISDN.

Nixdorf, whose founder Mr Heinz Nixdorf died in mid-March, is pressing its 8840 office system. Triumph-Adler, the resurgent subsidiary of Volkswagen, is stepping up its drive into the sector with its M32 multifunctional workplace system. A deal with Digital Equipment Corp (DEC) will allow the M32 access to DEC's worldwide network through the latter's "all-in-one" office information system.

In a broader sense, T-A's deal with DEC is a sign of the growing pressure on different manufacturers to improve compatibility. The very proliferation of products has bewildered users "Basically, they're in a state of confusion," argues Hilde Uller of the Munich-based Dataquest. Over how to connect up what they've already got, and at the same time keep it open for systems which are coming, and in line with future standards."

The debate is nothing if not complicated. There are at least 15 national, regional and international agencies in the standards business. Behind the delicate fencing over norms lies the crucial issue of allowing consumers to choose the cheapest, most suitable equipment, in the secure knowledge that it will fit in with what they have previously installed.

It is an argument which pits the small supplier, strong in a niche of the market, against the big manufacturers like IBM, which cover the entire board.

Looming in the background stands ISDN, the embodiment of the future fusion of telecommunications and data processing Enmeshed in the argument is the Bundespost, which is promoting ISDN. The powerful West German telecommunications agency has long been under fire for its allegedly pedantic and monopolistic approach to ISDN standards.

Ominous

It is now embroiled in a new conflict, pitting it against even traditional allies like Siemens, over plans to streamline the country's complex existing telecommunications regulations. The West German manufacturers fear that the net result might merely be greater de facto Bundespost control over the computer and electronic *data equipment sectors.*

More ominous, perhaps, could be the consequences of effectively applied standards on Japanese penetration into the West German office equipment sector, and export markets traditionally held by domestic manufacturers.

Mr Heinz Nixdorf was but one who warned, shortly before his death, that if Japanese producers adapted to the new norms in a big way, then West Germans could soon cease to be net exporters of communications technology, squeezed out by the lower labour costs of the Far East.

Controlling numbers and paperwork

Banking and finance

ALAN CANE

● IN THE US, the data systems division of Zenith Electronics wins a $27m contract to supply the Inland Revenue Service with portable computers for its auditors to use when checking company accounts.

● In the UK, Wang wins a *£18m order from* National Westminster Bank for a broad range of office automation equipment including minicomputers, personal computers and networking products.

* * *

These two recent and spectacularly large orders represent the tip of the potential for automated office systems in the financial services industries. They are important because they illustrate the two ends of the electronic office spectrum.

On one hand, the need to provide individuals with computing power at the workplace, whether it be his or her own office or other premises entirely; on the other, the need to integrate systems of different kinds, different functions and from different makers to give the maximum *benefits.*

The financial services industry is the bellwether of office automation. It has the resources to buy and develop the best in computer based systems and the most compelling reasons for making them work efficiently. And more than most, its style and form of business lends itself to computerisation. There is a discipline in financial transactions which accords well with the protocols necessary in electronic transactions.

For the past 20 years, the world's banks, building societies and thrifts have been installing and commissioning large scale batch processing systems to handle their accounting functions.

Investment

Most are now in the throes of overhauling these systems to take account first, of the dramatic changes in technology which have taken place over those two decades and, second, of the equally dramatic changes in the business environment with a new emphasis on competition and exposure management.

The forces driving the banks and other financial institutions towards investment in office automation include:

● The need to control the growth of staff numbers and to make better use of existing staff.

● The need to curtail the paperwork involved in handling cheques, credit sales vouchers and so on.

● The need to offer new and innovative services and to improve the way they market their services generally.

So, cutting down on the paperchase which accompanies a cheque transaction (cheque *truncation) is a powerful* motivation for involvement in electronic funds transfer at the point of sale (eft/pos).

And the desire to free branch staff during the week to market new and existing services while opening the branch with minimal staff on Saturdays is an equally powerful motivation for involvement in high-speed cash dispenser and automated teller machines.

These examples may seem somewhat removed from the usual concept of "office automation" — the replacement of typewriters with word processors, the replacement of telex with electronic mail and so on. It is important, therefore, to emphasise that while word processing and electronic mail are essential building blocks in an electronic office, they are *no* more than that.

"But it was soon discovered that the typical office contains many different kinds of worker doing many different kinds of work."

It goes on: "Once the early candidates for word processing had been mopped up, office systems were practically stalled. There was no obvious, single follow-up application. Progress had to be sought on a number of fronts and simultaneously."

This meant relative stagnation until a year or so ago, and only now is the scope for office systems expanding again.

It has to be emphasised that much of the problem has been the fault of suppliers who have consistently oversold their products.

They have either not worked effectively, or have cost too much or have not fitted well into conventional office practice.

The history of the local area network (LAN) is a powerful case in point. To operate effectively in offices, workstations must be able to communicate quickly and reliably. Conventional methods of connecting computers to their terminals will do the job but are cumbersome and expensive.

Convincing

The LAN is an economic solution to the problem, usually involving cheap video cabling, twisted pairs of copper wires or even optical fibres together with clever software and data transmission techniques.

One of the earliest and still one of the most convincing techniques was Ethernet, devised by Xerox and supported by the chip manufacturer Intel and the minicomputer manufacturer DEC.

But although it seemed an excellent solution, there were problems which dogged its ready acceptance. It was cumbersome to install in older buildings (coaxial video cabling is inflexible and heavy) and expensive at about $1,000 for each new terminal attached to the network.

So LANS, the new hope for office automation in 1980, languished until only a year or so ago when IBM (which had been noticeably reluctant to give any direction until then) announced first a cabling system for new and reconditioned buildings and then a LAN of its own design.

The IBM LAN was different in kind to Ethenet and other LANS which were then on the market but, as with so many other computer products, it established credibility for the technique. One consultant said: "Until then, LANS were Mickey Mouse products . . . IBM's LAN made them an acceptable part of the information technology world."

Furthermore, IBM made sure that computers connected to its LAN could "talk" to computers attached to other LANS through a translation device or "gateway."

Costs, however, are still too high, at anything between $600 and $900 per attachment.

This history is a model for many of the essential elements in the electronic office. Early promise followed by stagnation and then gradual acceptance through being legitimised by IBM or some other major office systems supplier.

IBM is the leading supplier of office systems products and is expected to dominate the office market in the immediate future. According to Butler Cox: "The difference between success and failure for other suppliers may well depend on how they react to what IBM does and the extent to which they can take advantage of the 'window of opportunity' presented by IBM's dominant position."

Compatibility — the ability of one computer system to be plugged into any other — is a key issue already and is going to be more so in future. IBM may well be the dominant supplier but it will not be the only one and it will be critically important that systems built by different suppliers should be able to communicate with each other.

That will be a complex task, especially where text, data, voice and image are all to be transmitted along the same data pathway.

The pioneers of the electronic office had the right picture of the future, but in their enthusiasm, they oversimplified and oversold. Office life is more complicated than that, and, as this survey shows, it will take the electronics business longer than imagined to come to terms with it.

* * *

* *New Opportunities in Office Systems; Butler Cox, 1985.*

● The deregulation of financial markets, leading towards an eventual merger between the American and European capital markets, brings with it the demand for 24-hour office services in the City and a requirement to transfer data electronically between the world's financial centres. And they need to be in forms compatible at both ends of the link.

Among those companies which are helping to serve the growing financial and legal communities is Pandick which has a rapid and confidential service of bulk or specialised photocopying, laser copying and laser printing, computer generated graphics, word processing, computer data media conversion and text data communications.

Be sure everyone can use the office system

Software

CLAIRE GOODING

THERE IS a big difference between an electronic office and a "personal workstation." The difference is really other people: the whole concept of an electronic office is that it serves a community, and has to be all things to all people.

Software suppliers have taken a long time in becoming aware of this difference. The history of personal computing is one of enthusiasts who are prepared to grapple with difficulties, because they are motivated, and have clear goals. One individual may, if he likes, spend time fighting software dragons, without bringing the rest of the office to a halt.

An entire office cannot afford the luxury of an inefficient or bug-ridden system. The software supporting an electronic office has to be totally reliable, easy enough to be useable by everybody, whatever their ability or aptitude, and good enough at the various parts of its job to convince all its users that they are actually better off using it.

Software authors are fond of talking about "integration," which is an awesome way of describing the far-from-startling idea that different pieces of software should work together, and share the same data.

"Integration" and "interaction" are fairly new concepts to software, but they are basic to the way that people (not computers) work together—and any software which cannot reflect that is hardly likely to find favour.

The popular spreadsheet Lotus 1-2-3 proved a point by being self-explanatory, and very much in tune with its users. To extend that "sympathic" element across a whole range of applications—word processing, diary, accounting, mail, and database—is more difficult.

In fact users soon found holes in the early attempts to supply integrated personal software, such as Ashton Tate's Framework and Lotus' Symphony. One of the complaints was that the number of facilities made the software difficult to navigate, while another was that the individual elements, such as the spreadsheet, were not flexible or powerful enough to satisfy the people who were bound to use them all day, every day.

Software for the electronic *office must fall into neither* trap, and it also has to fulfil the rigorous requirements of being used by many people simultaneously, across a network. Multi-user software has to keep strict control over file usage, locking one user out of record already being accessed elsewhere. As well as protecting the integrity of the data, it also has to be secure in the case of a system crash, able to recover files and "remember" the state of data before the crashed transactions.

Any buyer ought to be able to take such features for granted, and for most people the most important, most visible part of an electronic office is the "user interface." Everything ought to be obvious, preferably without looking at *a manual.*

IBM, looking for a suitable candidate for its seal of approval, picked on an all-British product, QED, from Quantec of South London, established in 1982. QED is an integrated range of software comprising text management, data management, time and appointment management, project planning and electronic filing.

One of its most versatile features is its ability to exchange data with other programs, including "independent" programs such as Lotus 1-2-3, which simply share the computer's memory with QED.

This means that individual users can stay devoted to their particular software favourite, but still take advantage of the common user-interface with which QED wraps its individual components. It is available in single and multi-user versions, and is being distributed by IBM with the IBM Personal Computer Network, at a user-price of £295 for single users and £500 for a basic (two-user) multi-user system plus £225 per extra user.

According to one of QED's users, Spartex, (also a dealer in the computer market), QED is finding favour with such users as advertising agencies, solicitors, recruitment agencies; anywhere in fact, where everybody needs to know what everyone else is doing, and appointments can too easily be double-booked.

One of the big advantages of the common user-interface, according to Spartex, is that new users need very little, if any, training, to be able to use unfamiliar tools within QED.

Another feature where QED scored over such rivals as Spotlight and Sidetrack was that data does not have to be reformatted to pass between, for example, the word processor and a mailing list, and QED can run independent programs such as Lotus from inside itself.

Spartex's own configuration runs on the Novell network, and includes Lotus 1-2-3, Omicron's accounting suites, Microsoft Multimate for word processing, and Datafiex and dBase III databases for data management.

Once the flow of information throughout the office is improved, it is easy to get hooked on electronic communication. There is a certain cachet in flaunting a Telecom Gold number on your business card, but the pitfalls are that the network is only any good if everyone else is on it, too.

Such networks are growing in popularity; many favour the "private" mail services such as One-to-One as being more friendly and easy to use than Telecom Gold, which is still something of an enthusiast's toy.

Electronic mail has a long way to go. One user of PROFS, IBM's own electronic mail service, admitted that while everyone enjoyed using the service, it could not be relied upon in an emergency.

"If anything's really urgent," says a secretary, "we run down and stick a bit of paper on the terminal."

Bits of paper will be with us for a long time yet.

Your money back in ten minutes a day

Managers on-line

MALCOLM PELTU

MORE MANAGERS and professionals are becoming direct users of electronic office workstations, which is helping office automation to make a bigger impact on business performance for companies of all sizes throughout the UK.

All managers at Commercial Union Assurance, for example, have their own desk-top workstation. It can be used for electronic mail, finding information from large central databases, and typing text when producing reports.

When attempting to cost-justify the system, it was estimated that the workstations would recover their costs reasonably quickly if they made a saving of only three per cent (about 10 minutes a day) in management time.

Such a small time saving was clearly possible, but it was also necessary to show that the system would help management effectiveness. One of the early users, a regional manager, quickly came up with tangible evidence that this was likely.

Using traditional mail and telephones, it could take up to a week for him to find out detailed information about something throughout the region. It took this time for information to filter through to all line and branch managers and back up again. With electronic mail, however, responses could be obtained within 48 hours.

All 11,000 marketing and services staff at IBM UK, including 8,000 managers and professionals, are being linked via its National Office Support Service (NOSS), at a cost of about £70m over five years.

Targets

The sole criterion used in making a financial case for that investment was that it would increase the productivity of its users, although other important benefits were expected, such as more efficient communication, lower costs for traditional office equipment and mail handling.

NOSS is expected to pay for itself within three years of its start in 1984, provided it meets clearly defined targets for productivity improvements for its users: 2 per cent in its first year, 5 per cent in its second, and then 7 per cent for the next three years.

Detailed analyses have shown that it has been slightly below target for the first two years but that it is likely to exceed its 7 per cent target this year. A key finding of these evaluations is that benefits increase significantly as users become more experienced and the performance of the technology improves.

Measurements of productivity gains are based on interviews with users and their managers which take account of their subjective perceptions of improvements to their effectiveness. In addition, more "objective" quantified statistics are obtained from users about how they spend their time and from automatic gathering of information about the numbers and types of activities for which the system is used.

Salesman David Day says "NOSS saves me at least an hour a day, speeds up and improves the quality of written communications with customers, and generally makes my work more efficient." He uses it to send electronic messages to colleagues and to arrange meetings and appointments. He also types many letters himself from his own screen-based workstation and can include previously prepared text, like product details, into documents he prepares.

Burroughs' new B27 computer system in an automated office: such systems offer valuable savings in management time

In large companies which *allow business autonomy* to operating units, corporate information technology policies have to be tailored to a variety of needs. The Bowater Industries group, for example, contains about 100 companies. The experience of one of them, Crossley Builders' Merchants in the East of England, illustrates how the group's corporate computing expertise has been harnessed by *local management.*

The group's information technology services department developed a computer system which deals with each depot's business, starting with recording orders at the customer counter and including stock control and management reports and analyses. Regional headquarters are linked to the depot computers and get daily sales information from them, as well as feeding back information on prices and special offers.

Depot managers, however, can adjust their own systems to meet special customer needs or other local requirements.

Estimation

Mr John Marriot, who was manager of the depot at Holbeach, Lincolnshire, when the computer was installed in 1984, says, "I estimate the computer increases profits by several percentage points, mainly because it provides accurate, comprehensive up-to-date knowledge of what is happening in the depot."

Examples such as these expose the myth that managers have "keyboardphobia" and will refuse to work at workstations with keyboards. A major reason for overcoming any reluctance among managers and professionals is the example set by top executives.

Mr David Day at IBM, for example, says, "When I first heard we were going to get NOSS, I wasn't sure it would help me. But my manager was committed to it, so I realised it was important for me to use it too."

At Commercial Union, the first users were the most senior managers, who also had responsibility for allocating money to pay for it. "We were convinced the system would succeed only if these senior executives had direct experience of its benefits and showed a personal commitment to it," says Mr Peter Monk of the company's technology support unit.

The success of electronic mail systems also depends on connecting all people regularly contacted. This means having fast growth in the numbers of workstations linked to the network in the early phases, otherwise the system may fall into disrepute.

Larger companies, like those already mentioned, can draw on the technical expertise of specialists, who have learnt lessons on how to avoid many problems from previous experiences with computer systems. Smaller companies, however, have often had to handle office automation without such assistance.

This has led to false starts and a waste of time and money. Marketing and public relations company Communidata, for example, had to abandon a £20,000 minicomputer because it failed to perform as expected. Introducting a network of personal computers at book publisher William Heinemann was a "trial by fire" according to Mr Bazyli Solowij, who is responsible for the system.

Mr Solowij found difficulty getting suppliers to discuss his company's needs without resorting to confusing jargon, a common experience among smaller companies. Heinemann has also had a great deal of problems with printers, first with a word processor and then with the network.

Unreliable printers, particularly with local networks and personal computers, frequently cause significant problems, indicating that great care should be taken in selecting even apparently "low technology" parts of a system.

Companies who get their systems from third-party dealers, rather than directly from the supplier, often complain of the service they receive. Shipping insurers Thos R. Miller, for example, found that the dealer who supplied its sophisticated office automation network had insufficient experience of the system and trained staff. The dealer was often in as much doubt about how to handle problems as Miller's own staff.

Provided the initial systems are not too disastrous, companies who have persevered through painful "teething" problems usually find, as Mr Solowij comments, "We've come through the trial by fire and are enjoying the benefits of our computer now."

Suppliers and dealers, however, should take more responsibility for giving better help to companies with little or no computing knowhow of their own. Not only will the customer get quicker and more effective benefits from their system, but the supplier will profit from continuing business from the customer.

The electronic office needs of even a small company can escalate, particularly when office automation is contributing to rapid business growth.

Further information on the office automation examples quoted in this article, together with other Case Studies, is available in FinTech 2, Electronic Office, a twice-monthly newsletter published by Financial Times Business Information, Tower House, Southampton Street, London WC2E 7HA (01-240 9391).

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THE ELECTRONIC OFFICE 6

Three case studies highlight the growing diversity of automated business systems

Cutting back on the paperwork and phone calls: a receptionist at an Austin Rover dealer's showroom is able to rapidly locate a car to match a customer's exact requirements using the new "Dealer File" system

Rapid location of parts

The motor industry

JOHN GRIFFITHS

VEHICLE MANUFACTURERS began equipping their dealer networks with computerised systems in the early 1980s, primarily to allow them to communicate with each other to locate stock.

Since then, their applications in the UK have widened — a customer can walk into a BMW outlet, for example, draw up his order for a car at a terminal and watch the details despatched to the factory. Subsequently, he can track its progress through the production and distribution system, so that he can know fairly precisely when it will be delivered.

This month, however, it is Austin Rover — in conjunction with BL's computer systems and software company, Istel — which can claim to be taking computerised relations between dealer and manufacturer significant steps further.

It has launched a system called "Dealer File," to eliminate the mountain of paperwork which ordinarily flows between the two parties.

Some 2m transactions which would normally be processed each year, manually and on paper, have already been transfered to the new system.

It embraces a wide variety of functions including stock location, sales transactions, vehicle ordering and warranty claims, as well as servicing a management information function between Austin Rover and its nearly 1,400 dealers.

It has been developed by linking Redditch-based Istel's mainframe computer systems with its "Viewshare" viewdata service, then providing two-way communication facilities via a third Istel service, its "Infotrac" national telecommunications network.

The growing requirement for a fast "paperless" system was underlined by the large new car sales peaks which have become almost a tradition in August. Some 10,000 inter-dealer transactions took place in the three weeks leading up to August 1 and during the first two weeks of the "boom."

Most of these transfers were a direct result of computerised facilities already in place, under a stock locator system first installed at dealers in 1980, and on which the latest system expands significantly.

"Dealer File," for example, allows a dealer to change the specification of a model right up to the point at which it enters the build programme.

Sales and service transactions, debits and credits are linked to the national auto-banking system.

"Sales File" helps dealers identify sales opportunities as well as highlight problem areas needing action. Analyses of individual dealers' sales-by-model enables the dealer to compare his performance against local or national trends.

'Service File'

The "Service File" makes it possible to process warranty claims directly through the viewdata system, to speed both processing and payment.

And the "Finance File" gives management an immediate and up-to-date statement of debts and credits with complete analysis to facilitate stock and cash control, and to enable dealers to plan effectively for any major cash flow eventualities.

In addition, a Profile facility provides dealers with a "who's who and where" within the Austin Rover organisation.

"It literally turns on its head the old-fashioned method of communicating by paper," says Austin Rover's marketing director, Mr Malcolm Harbour. "It brings much closer the day of the 'minimum paper' car dealership, when all transactions can be completed on a computer screen, leaving the car dealer with more time to get on with his prime job of selling and servicing cars."

Previously, using postal services, vehicle status information produced weekly could be up to a fortnight old on arrival, while vehicle transfer documents could take up to 14 days to turn round. In addition, there were error risks in converting written form details into acceptable computer input.

With the new system, all information is up-dated within 24 hours.

Communications costs are also being kept to a minimum through the use of more than 60 network dial-in points providing local or "A" telephone charge rates to 95 per cent of the dealer network.

Within Austin Rover itself, the link-up embraces its headquarters at Canley, the production plants at Cowley and Longbridge and regional sales offices scattered throughout the country.

Looking ahead, both Istel and Austin Rover make clear that "Dealer File" will not be the end of the story. It will be developed further towards a completely paperless system.

Computer as farm tool

Agricultural applications

ELAINE WILLIAMS

MR OZ Hotz de Baar has 180 cows, 850 acres of cereal and a computer. He is a rare example of a farmer who has applied computer technology in the management of his farm. He uses the computer to store statistics on the milk yield of his herd and other vital dairy farming information which has helped him maintain profits even in the face of milk quota cuts.

Having developed the computer software himself, Mr Hotz de Barr decided to set up his own computer company to sell his programs to other dairy farmers. Several hundred of his systems are now operating in the UK and Europe and his company, Upthorpe Computer Programs, is one of the leading systems suppliers in the dairy sector. The market is, however, limited and companies like Upthorpe are unlikely to become large software houses.

The reason is that despite the steady fall in the cost of small business computers, studies from the Ministry of Agriculture, Fisheries and Food, show that only between 10 and 15 per cent of farms can justify on economic grounds the purchase of computer systems.

Dairy and pig farming, for example, may benefit because of the need to keep individual records of animals but most farms are simply too small to make use of the general accounting offered on computers and there are many cheap alternatives for farm accounting from traditional accountancy firms and farming agencies.

If accounting, then, was the only determining factor, few farmers would opt for an electronic solution. The National Farmers Union, however, believes that technology does have an important role to play in various aspects of farm management. Mr Brian Fowler, who guides the union's policy on technology, says that the strategy has been to advocate the use of Prestel, British Telecom's electronic information service.

The attraction of Prestel is that it is relatively easy to use and is low cost. All the farmer needs to gain access to the system is a suitably adapted television set and a telephone line.

Yet these familiar tools mean that the farmer can link into the wealth of farming information stored on Prestel by the NFU and other information providers such as ICI.

The NFU has ben an information provider since 1979—a year after Prestel became a public service. The union has more than 2,000 pages of farming data and 2,000 regular subscribers to its service. The information is split into a number of specialist sectors such as fruit and vegetables, livestock, arables and more general data on energy costs.

Subscribers are joining the service at a rate of about 35 a month though the NFU has a long way to go before its 100,000 membership — which represents 80 to 85 per cent of the total farming community in the UK — are linked into the Prestel system.

Even so, the NFU has now used Prestel to increase its own efficiency in sending information to its county offices. Prestel sets in 48 offices around the country are linked into a private information network so that the NFU can respond more quickly to individual requests.

Other organisations with farming interests are also convinced that the Prestel route is the best introduction to computing type services because they overcome one of the basic communications problems in reaching isolated farmers. ICI has been offering is Agviser service for the past two years and British Telecom took over Farmlink last October.

Agviser has taken the concept of home computing a little further by offering remote computing to farmers. The ICI service offers more than ten specialised programmes which help farmers plan daily cow rationing, silage needs and milk price calculations, for example. Within the next 18 months the NFU hopes to introduce a similar remote computing service for farm accounting.

The Bank of Scotland and Agviser have also set up a home banking facility for farmers which allows bill paying, account balances and a number of investment services to be carried out over the Prestel network.

By this gentle introduction to Prestel-based systems, Mr Fowler believes that farmers will eventually become aware of the wider possibilities of computer systems. So, some farmers will swap their television sets for small computer systems.

Mr Peter O'Neill of the Agricultural Training Board points out that in the four years between 1981 and 1985 the cost of a small business machine has fallen by 80 per cent so that a reasonable system can be purchased for less than £2,000.

Mr O'Neill is a member of a steering committee that is looking at the potential of even lower priced systems for the small farmer. He is involved in a £26,000 project funded by a number of organisations and being carried out by the Agricultural Training Board, Bicton College of Agriculture and the Searle Hayne College. The project is looking at producing a useful computer system for farming applications for about £1,000.

Quick response

Until recently the problem was not the hardware but the availability of suitable software. Now there are more than 30 companies offering farm software but the majority are small organisations and less than ten companies can claim to have sold many software packages.

Indeed most application of electronic technology is in farm production such as in automated milking parlours and computerised feeding equipment for a variety of livestock. Companies such as Alfa Laval have developed systems which can provide feed for dairy cows based on individual animal needs.

Much raw computer data is gathered by such automated equipment — this could form the basis of a general management and planning system if this information could be analysed by a business computer.

Alfa Laval, whose expertise is in production equipment, has shied away from providing these management tools but its products have electronic interfaces which allows its equipment to be easily linked to most common types of small computers.

Realising the need for farm management software, the company turned to Upthorpe Computer Programs based near Didcot in Oxfordshire. This company jointly developed with Alfa Laval a programme called Alfa Twin which automates for dairy farmers milk yield recording and feeding in the milking parlour.

Information from this programme can be fed directly to another piece of software called Supercow, also an Upthorpe product, which is a dairy management system and provides the farmer with statisitcs on the individual performance of the herd. Farmers need to know the yield per cow, the quality of the milk produced, feeding requirements, health records and calving details for example.

Livestock farmers in particular diary and pig enterprises have been highlighted by the Ministry as the sector which has the most to benefit from computer management systems because of the need to keep records of individual animals. Even so ministry studies show that it is only cost effective for farmers with medium- or large-sized farms with upwards of 100 cows. So the electronic office for every farmer is unlikely to be realised before the end of the decade.

Cost comparison: UK electronic mailbox services

Level of use	No of users	Monthly traffic (per user)	Sent	Rec	Monthly Costs (ex VAT): BT Gold	Easylink	Istel Comet	One-to-one
Low	1	Mail Telex	30 10	20 5	£31-60 (+reg: £40)	£39-20 (+reg: £40)	£51-61 (no reg)	£20-75 (+reg £50)
Medium	10	Mail Telex	60 20	40 10	£632 (+reg: £300)	£490 (+reg: £130)	£632 (no reg)	£415 (+reg £100)
High	100	Mail Telex	100 30	67 15	£7,607 (+reg: £300)	£7,730 (+reg: £1,030)	£7,580 (no reg)	£6,488 (+reg £100)

The figures above represent the actual cost of using the different services, including telephone charges but excluding start-up costs for hardware and software.

- All charges are calculated from the respective providers' published tariffs. Providers have seen Fin-Tech 2's costings—only Easylink failed to respond or confirm the calculations.
- Reg=registration fee. This is a one-off charge. Large users of Easylink will probably be given discount.
- Mail message and telex length taken as 2048 characters. Telex charges are at internal UK rates.
- All mail messages and telex are created off-line and sent separately.
- Low and medium users send and receive at 300 baud, high users at 1200 baud.
- Telephone calls charged at BT local standard rates (5p per two-minute calls).

Source: FinTech 2

Public utility sets up integrated liaison

Administration application

BORIS SEDACCA

THE cost of office automation is difficult to justify in commercial organisations, let alone public administration, but Wessex Water Authority provides a good example of an integrated communications strategy developed by a public utility.

Its services include water supply, land drainage and sewage treatment over an area of 9,918 sq km. The population supplied with water numbers about 1m and for other services 2,300,000.

There are five key locations: three divisional offices where the authority's direct management is carried out; a small headquarters location; and a direct billing centre.

Consumer service is given a high priority and an investment made in telemetry systems, in particular, has shown that the service can be improved and costs reduced.

Previously, calls to major centres could wait up to 30 seconds to be answered and many callers gave up because they were not answered in sequence. On inter PABX circuits the chances of getting a line were worse than one in two.

Outside callers were not presented with a unified view of the authority or with a number of discreet services accessed through different procedures.

Significant increases in traffic for data and speech were predicted. Overall data with the advent of additional on-line systems and electronic mail were expected to double within three years.

Voice communication is important to the authority as it is the most widely used form of communication with those outside and within and involved the largest expenditure in annual revenue.

The telemetry system which covers all functions is managed by a 24-hour control centre in Bristol in association with similar centres operated during normal working hours and emergencies.

Separate communications systems for speech, radio, telemetry and data had all evolved to meet demand, but inflexibility and capacity problems were becoming increasingly apparent.

Wessex has consistently set the pace in the water industry in its use of information technology. In 1982, with the help of consultants BIS Applied Systems, a review of the authority's information systems was completed.

The tendency for incompatible computer systems to impede progress was recognised. An information services department was set up to bring together existing staff and resources, including computer services, operational research and organisation and methods.

"We designed our network so that our consumers could make ready contact with us and get a ready response rather than going to an answering machine," says David Beal, head of information services at Wessex. "We could also make some economies because we did not have to rely on external British Telecom lines so much."

Projects have included the use of a Husky portable recorder and computer terminal. This waterproof device, with a built-in screen, is connected by telephone line to the mainframe computer in Bath at the start of each day and loaded with information about the meters to be read that day.

The meter reader can record readings of up to 300 meters, the details being fed directly into the computer at the end of the daily round. There are savings in paperwork procedures, the most significant being a reduction from 19 days to five days in the time in which bills are sent out.

Another project is the Wessex 100 Logger, an accurate portable recorder for operational information such as water flow and pressure. Developed because other commercially available equipment was inaccurate and unsatisfactory, it records variables such as pressures and replays them in graphical form at the local offices.

As regards communications, separate networks for telemetry and for computer data were found to be similar and all the authority's control rooms and offices are now linked by one network using the latest digital technology.

The communication channel is a high-capacity circuit from British Telecom which will convey speech, computer data, telemetry and radio simultaneously at a lower cost than the previously separate circuits.

The telemetry scheme uses BT leased circuits linking seven mini-computer systems on a hierarchical basis. Two of the links are shared with data-processing.

The central mainframe computer at Bath is based on twin NAS/Hitachi processors which are IBM-compatible.

All major computers have dual processors to share the load and to provide continuity of service in the event of failure. There are now 350 terminals throughout the authority.

At the other locations Wang and Motorola minicomputers handle office automation and local computing requirements.

"Through a Wang terminal we can get on to the mainframe system as easily as from the ones that are directly linked to it," says Beal. "We also have about 50 IBM personal computers for technical applications such as graphics and local data manipulation.

"We have taken advantage of IBM compatibility so we can pick and choose suppliers. In practice it has meant that we have virtually no IBM equipment apart from PCs. We recently got rid of an IBM 4341 in favour of an IBM-compatible NAS machine.

"When we were selecting office automation equipment the short list included IBM. It was no doubt rugged and very sound but it lacked sparkle. We found we preferred the Wang."

A consumer calling any local office can be connected to any of the authority's locations through five main PABX's linked by point-to-point private circuits leased from BT.

Fifteen out-of-area exchange lines enable any consumer to make an account enquiry at a local call rate while a Freephone out-of-hours service permits contact with the operations centre, particularly in emergencies.

Separate leased private circuits and three UHF point-to-point links are connected to the various radio base stations and control centres for 800 mobile transceivers.

"Office automation is notoriously difficult to cost justify," Beal concludes. "But by putting in a communications network, which involved a significant investment in networked Harris digital PABXs at every location, we have been able to rationalise all our central services, including new works design, scientific services, stores, vehicle support, payroll, and finance."

Finding new ways of talking to machines

Novel input and output

GEOFFREY CHARLISH

COMPUTER RESEARCHERS frequently ask: "What is the best way of communicating with a machine? Should users of the future electronic office be content with sitting in front of a computer keyboard and typing requests for information or is there a more natural way of entering and retrieving computer data?

There are two lines of thought. One is that future generations of office workers, now *cutting their teeth on school* computers, will become fluent in the use of the keyboard; another line is that keyboard communications is a clumsy and slow way to delve into the archives of the vast computer filing systems that make up electronic offices.

Today few people in business, apart from secretarial and computing staff, have any keyboard skills. This has led a mass of research in other ways of linking humans to computer and among the most exciting is speech.

Though talking may seem natural to a human, developing computer systems which can understand speech is extremely difficult and much of this technology is still in its infancy. Indeed, systems in operation today are relatively simple. Texas Instruments has had a personal computer for some time that can respond to a limited number of spoken commands and Ericsson in Sweden has produced an office telephone exchange which allows internal calls to be dialled using a voice command.

It is digital technology—the basic language of the computer—which holds the key to progress in speech processing. The changing tones of the human voice is converted into a string of computer digits.

The ideal speech recognisers would be able to understand or interpret anything anyone said to them, but existing systems would be hard pressed to comprehend a few connected words and phrases. Most understand only one speaker it has been "trained" to recognise and the speaker often has to make artificial pauses between words.

These speech recognisers work by storing in digital form basic patterns of words and phrases. These basic patterns or templates are used by the machine to compare against spoken words. The range of the vocabulary the system can recognise depends on the *library of templates stored in* its memory. It is a costly process and most commercial systems have a limit of about 1,000 words.

Current research is aimed at reducing costs and making speech recognisers speaker-independent. PA Technology, using basic research carried out by the Royal Signals and Radar Establishment, has been contracted by the British Technology Group to develop a low-cost design which should be on the market later this year. Other speech processing companies, such as Logica, are also looking at the problem.

At the other end of the speech-processing range—giving electronic equipment a voice of its own—has proved to be more successful. Limited speech synthesis designs have already appeared in commercial products such as microwave ovens, lifts, vehicles, and toys.

But it is generally recognised that access to computers and automated databases via the telephone is likely to be one of the largest applications of speech synthesis.

The main technical challenge is to turn written data into logical grammatical speech. In English, for example, there are so many exceptions to grammar and pronunciation rules that the computer needs to have a store of the words the pronunciation of which depends on several factors such as context. All this adds up to a very large dictionary of exceptional words.

So far, examples of large speech sythesis systems linked to databases are rare. Sperry in the US ran a public weather information service to test acceptance of talking computers, and the Union Bank of Finland has a voice synthesiser connected to its banking computer. Account holders can carry out banking transactions via the telephone and be guided through each transaction by the computer.

Systems for large databases, in general, suffer from poor speech reproduction and the main thrust of research is aimed at better voice quality. Many of the developments in improving the interface between humans and computers remain linked, therefore, to the screen and keyboard.

Retrieval

Several companies have looked at the basic shape of the keyboard and have decided that its layout can be improved to allow experienced typists to increase dramatically typing speeds. The Velotype keyboard is typical of the genre. Its curling, raised keys are angled so that the user does not have to make large hand movements in order to reach the keys.

Also for the input of data into the computer, companies have developed systems which can turn written text into computer data but there are big problems with hand-written information. As with voice communications, there are many different hand writing styles.

However, information retrieval offers far more scope for the inventive mind. Better written software has brought the idea of icons to the computer screen. Here simple symbols guide the user to the information stored. Some systems can even represent a conventional filing *system with cabinets and individual* files on the screen.

Companies such as Hewlett Packard offer touch screens so that the user only needs to touch the relevant symbol to unlock a particular file. Other alternatives are the mouse pioneered by companies such as Microsoft and Apple, and light pens which have mainly been associated with graphics tablets for screen design systems.

Overall, it seems that screen and keyboard systems will tend to predominate for to the end of the decade at least. So, the development of better screen layouts based on icons are liekly to offer the best way of simplifying access to computer data.

The Nestar Plan 3000 network in use at Morgan Grenfell Bank

Magnetic attraction of 'floppy' technology

Electronic storage

ELAINE WILLIAMS

THE market for both "floppy" and hard disk rotating magnetic memory is likely to grow at 17 per cent a year in Europe till 1989. By then it will probably have reached $7bn from about $3.5bn in 1985, according to market research group Frost and Sullivan.

This is in spite of the fact that there are threats just over the horizon from new breeds of bubble memory and from erasable optical disks that can store perhaps 20 times as much data as their magnetic counterparts.

Nowadays most active computer data is stored on rapid access magnetic disks, tape machines having been relegated mainly to longer-term archival storage or back-up duties.

The big, rigid disk packs are also fading fast (at 10 per cent per annum by value), simply because the big computers they serve are also on the decline.

The flexible or "floppy" disk started life in IBM in the early 1970s as an 8 in diameter product but the market for this size may fall by 29 per cent a year according to F and S. The more recent 5.25 inch drive, with some 40 manufacturers world *wide, should grow* at 14 per cent while the "star turn," the even smaller 3.5 inch device, is expected to put on sales at 62 per cent a year till 1989.

How far floppy technology has come is shown by the fact that a 3.5 inch disk can hold over 1.4m bytes (text characters), double that of the earlier 8 inch disk.

Just as the pick-up arm of a domestic record player can be placed to play any music band, so the read/write head of a disk drive, operated radially by a high-speed solenoid, can locate any of the 100 or so concentric tracks magnetically recorded on the flat metal oxide surface.

Originally it was believed heads would always have to "fly" just off the disk surface, which would have to run very accurately with no up-and-down wobble.

But in floppies, the disk is made of a thin, tough plastic and is held in a square envelope from which it is never removed: the disk rotates inside it and the head, in contact with surface except during radial searching, moves over a radial slot in the envelope. The mechanics were hard to believe when the technology first appeared, but a drive life of five years is normal.

Overshadowing the floppy, however, is the small, rigid disk Winchester, which has similarly shrunk from 14 in when introduced by IBM in 1967 to 3.25 in (1983).

Here, the head once again "flies" over the highly accurate rigid disk surface on an air gap only millionths of a metre thick. Fundamental magnetic rules say that the closer the head is to the disk, the more data can be stored per unit area. To prevent tiny dust particles entering the gap, the disk is operated in a sealed case.

Typically, a 3.25 inch drive holds 10 megabytes and a megabyte is equivalent to about 30 pages of the Financial Times, printed solid. A 14 inch Winchester can store 800 megabytes.

New technologies have pushed up recording densities. For example, the recording head's effective width, which determines how small the recorded elements can be, has been reduced by thin film techniques in which the appropriate microscopic metal thickness is obtained by depositing it using evaporation in a vacuum.

In prospect is "vertical" recording in which the tiny magnetic lengths representing digital bits, normally running one behind the other along the horizontal surface of the oxide, are instead created at right angles to the disk surface, allowing far more to be crammed in.

Competition for the $7bn European market is fierce, with at least 60 contenders according to F&S. Although US com*panies still dominate* (Seagate for example claims to make 40 per cent of all low capacity 5.25 inch Winchesters), there has been a growing challenge from Europe.

Rodime, which pioneered the 3.25-inch Winchester and Newbury Data Recording with its strong grip on the 14-inch market, have put the UK in an important position.

In the captive market (drives supplied integrally with computers), Olivetti claims a lead place in Europe with 80 per cent of the 5.25 inch Winchester sales.

Sony, which pioneered the 3.5-inch floppy market, now has intense competition from Canon, Chinon, Teac, Hitachi and several other Japanese companies.

Optical disk, a good headline maker, is still a small market but must eventually succeeed *when erasable technology* is commercialised, because the recording density is at least an order higher.

Optical recording uses a laser to make microscopic machine-readable marks which, in the first developments, were unalterable. All the participants including Drexler, Optimem (Xerox), Verbatim (Kodak), Optitech, and Storage Technology in the US, Philips in Holland, Alcatel-Thompson in France and *Plasmon* Data Systems in the UK are looking for commercially viable erasable media, as are several Japanese companies.

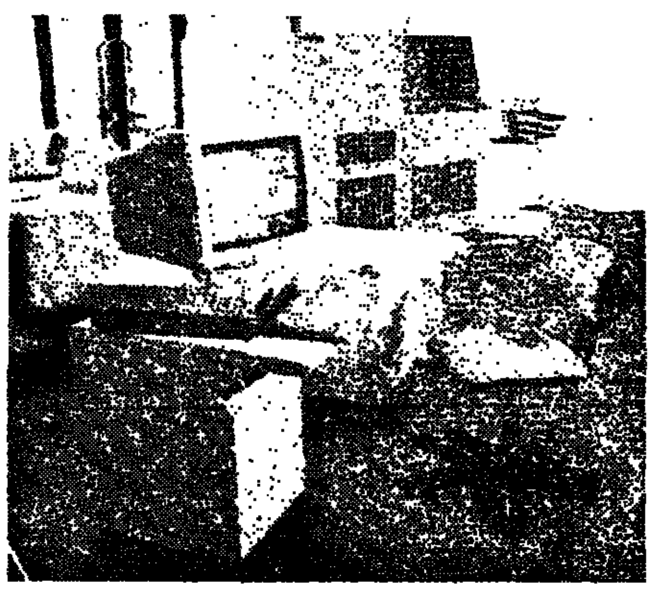
Late last year, Philips launched CD-ROM, a data storage version of the hi-fi compact optical disk. Over 600m characters (230,000 pages of A4 text) can be stored on the 4.7 inch disk. These read-only devices will be used mainly for data distribution, in the publishing and software industries.

Microscopic

There are other approaches. Alpha Microsystems for example, of Irvine California, offers systems that store 100 megabytes on a video tape at a cost of about 10 cents a megabyte. In another variant, Docdata of Venlo, Holland is developing a machine using optical instead of magnetic tape. Masstore, of Sunnyvale, California, uses a honeycomb of magnetic tape cartridges, selected by robot arm, for massive archival storage.

The bubble memory, in effect a stationary magnetic store where microscopic areas on a small surface can be magnetised and demagnetised to give binary storage, may be set for a comeback after faltering in the early 1980s. One million bits on a 10mm chip is typical, with very low error rates and low failure rates due to the absence of moving parts.

A $200m world market in 1984 is expected to rise to $400m by 1987 and *according* to F and S. Fujitsu and Hitachi have some 70 per cent. Cost is three to four times that of a floppy for the same capacity, but long life, robustness and the zero maintenance requirement are attractive.



The Olivetti FileNet document image processor: claimed to be the world's first completely integrated document storage and retrieval system with the ability to totally automate the paperflow in a business environment.

How systems link together

Networking

KEVIN TOWNSEND

NETWORKS ARE fundamental to the achievement of the electronic office. An office is not a series of individual people working independently of each other, but a network of staff working together towards a common goal. Computers in the electronic office must be made to do the same—and this is best done by networking all the different computers.

Short haul networks, otherwise known as local area networks (LANs), allow staff within a local site to communicate among themselves, and to share common corporate information and resources; long haul networks, better known as wide area networks (WANs), allow staff to communicate between different local sites and across international boundaries. In this way, a wide area network can be visualised as a series of LANs interconnected by standard telecommunications links (public telephone networks, leased lines, microwave, satellite and so on).

There are basically three types of LAN; generally known as "star," "bus" and "ring." A star network consists of a central processor with a number of user terminals and peripherals (disc drives, printers etc.) attached to it like the rays of a star. All communication between different users is performed via the central processor. A bus network is a single length of cable with data travelling up and down. User terminals and peripherals can usually be attached to the network at any point along its length.

A ring network is a circular cable with terminals attached to it. The main conceptual difference between the ring and the bus is that data in the ring simply revolves round and round in one direction until it is accepted by the destination terminal; while in the bus network the data has to travel "up and down" the cable.

LANs can use a variety of different cables to link the various terminals together. The most common of these is a co-axial cable similar to the cable used for television aerials. However, "twisted-pair" wiring, identical to that used by internal telephone systems, allows users to make use of existing telephone wires; while fibre optic cables are increasingly used in sensitive and confidential environments. Fibre optics is essentially light within glass, and cannot, therefore, be "tapped" secretly. Any attempt to "break into" the cable is likely to break the cable itself!

Data is transmitted between the different users on a network in either baseband or broadband signals. Baseband networks are primarily used as simple data networks with a single data communications channel. Broadband networks, however, use radio frequencies for the transmission, and are thus able to have several "channels" (or frequencies) in a single cable. This allows a broadband network to be a data, voice and even video network simultaneously.

Evolution

"LANs," summarises Richard Price, of specialist LAN suppliers Novell Data Systems, "have evolved over the past several years from being mere resource sharers (allowing peripherals such as disc storage units and printers to be shared by everyone) to very powerful multi-user, multi-tasking systems capable of successfully competing with the traditional minicomputers, while still harnessing and fully using the individual processing power of the ubiquitous PC."

The primary advantage of the LAN is thus obvious: corporate information, hitherto scattered and often repeated among individual users throughout the organisation, can be held centrally and accessed by everybody. Synergy, where the combined effect of the individual components is greater than the sum of the parts themselves, is the obvious advantage of networking PCs.

Most larger companies are now "international," with sites and/or manufacturing capabilities in many locations within many different countries. Each site will clearly benefit from its own LAN—but the company overall would benefit from a network linking all of the sites throughout the world.

Such a network is generally called a wide area network (WAN), and usually comprises interlinked LANs. The advantages here are similar to those of the LAN, writ large. Companies need no longer be constrained by the geographical limitations of their own resources, but can share all of those resources, whether human or material, throughout the whole organisation.

One of the leading suppliers of both LANs and WANs is Digital Equipment Corporation (DEC). But DEC is also the second largest computer manufacturer in the world, and a large international organisation (employing more than 70,000 people worldwide) in its own right. DEC's internal network is thus an excellent example of the design and use of corporate networks.

DEC's corporate policy is "a terminal for every desk." What that terminal is, depends on the function of the user. Thus, a typist or secretary is likely to have a word processor; an R&D employee might have a Professional PC; a designer would have a VAX station; while a clerk would probably have a terminal attached to a VAX minicomputer.

Locally, the network will be baseband ethernet; but in a few major sites, broadband ethernet is used. (Ethernet is probably the most popular LAN available. It was developed jointly by DEC, Rank Xerox, and Intel. It is a bus-based LAN, using co-axial or fibre optic cabling.)

Every DEC site of any significant size throughout the world has an Ethernet LAN. These are then linked together via the world's telecommunications systems to provide one large WAN controlled by DEC's own networking system, DECnet (DECnet is the software that controls the routing of data through the system).

The result is an international network that currently has 6,000 "nodes" (access points) increasing at around 300 nodes per month. The majority of these nodes are likely to be PCs and word processors, but some of them are large minicomputers that might each be supporting 100 or more users.

Electronic mail is the most obvious application of LANs and WANs. Any DEC employee can contact any other employee anywhere in the world, almost instantaneously. The sender need neither know nor care where, nor even in which country, the recipient resides—he merely needs to know the relevant network address. But other advantages are numerous. DEC's Order Administration system, for example, is one of the most advanced in the world.

Like most international companies, individual products can be sourced from different sites in different countries. However, with DEC's all-encompassing network, different parts can be located from anywhere in the world and brought together to fulfil individual orders in the most cost and time effective manner.

DEC's Jacky Brown summarises it thus: "With all electronic tools, their benefits lie in how they help people. An effective network allows people to co-operate closely and productively despite being hundreds of miles apart, and working in different time zones. With networks, a company can control its own destiny using the best resources wherever they are found, and not be bounded by local constraints."

● New system launched at CeBit '86 at Hanover: the Triumph Adler M32 workstation. It combines commercial data processing, word processing and office communications in one multi-functional system

Main impetus comes from the users

The need for standardisation

NEVILLE ASH

IN THE electronic office personal computers, printers, work stations, typewriters, word procesors, networks, all talk to each other without any problems.

This is the theory promoted by the computer companies; real life is different.

Mr David Firnberg, managing director of Eosys, a leading computer consultancy, says: "The situation has been caused by the self-interest of the computer companies." He comments: "Instead of a single universal standard which is accepted by all the major computer companies, we have a combination of proprietary systems strongly defended and a gradual move to the Open System Inter-connection standard."

Computer companies have a vested interest in proprietary systems as they lock customers into an exclusive environment. A universal standard makes logical sense from the end-users' point of view, but the OSI layered model makes the situation complicated.

Each layer has options and unless each computer company implements all of them the communications just will not work.

Standards are nothing new. They used to be set by computer companies for their own benefit.

Buying power

The original demand for standards came from academics and research institutions, without any buying power. Governments followed with the buying power. Governments followed by the large manufacturing organisations including Boeing and General Motors with their MAP (Manufacturing Automation Protocol) and TOP (Technical and Office Protocols).

According to Mr Chris Cheetham of ICL, "The fact that the drive is coming from the users is a good thing. It is much easier to know that the business is there and that's what the users want, rather than to try to estimate quite independently."

Other vendors feel standardisation may restrict computer companies, Mr Cheetham disagrees, "I think an externally determined standard is an additional discipline on a supplier, which is for his own good. OSI makes innovation easier and in the case of MAP users selected the Open Systems base rather than create a proprietary standard."

Open Standards are created by organisations like CCITT and OSI, manufacturers can work on the same specification and launch their products at similar times.

Closed standards are created by manufacturers and make life more difficult for other computer companies to produce products to connect into their systems.

DEC, ICL, Wang and Xerox all link to IBM through Gateways which allow documents in different formats to be transferred from one system to another.

The best example of standardisation is the X400 specification which intends to provide an international standard for electronic mail.

Rank Xerox is working towards the international standards, but believes it will take until the early 1990s before there are sufficient ISO standards around. Xerox says: "A lot of our standards are in advance of what OSI has ratified." Between 30 per cent and 70 per cent of Xerox customers abroad use IBM equipment so Gateways to the IBM system are essential."

DEC already has a single architecture linking its systems which it claims makes the two biggest players in office automation IBM and itself. And DEC can already operate at level four—the transport layer—under OSI using its Dec Network Architecture.

Market leaders IBM has recently announced it will be collaborating with the government-sponsored OSI standards test project. Its competitors believe IBM will still promote SNA (System Network Architecture) in view of their large installed base and the cost of bringing it into line with OSI.

ICL based its network architecture on OSI back in 1979 and its latest offering Officepower links both ICL and opposition systems.

Mr Ian Price, Wang Network manager, explained its aproach, "To have gateways into IBM, accept other work stations into Wang Net and work towards implementing OSI standards."

OSI—Open Systems Interconnection—is backed by the Department of Trade & Industry who are willing to fund 50 per cent of the cost of a study on the suitability of a multi-vendor installation. The department are willing to provide funding for up to 100 studies.

Performance

The next stage of OSI will be Performance Testing Certificates produced through agreements with the EEC and US. They will be created by European consortia and implemented by the National Computing Centre in the UK.

Local area networks will begin to receive these certificates by the end of 1986 followed by the Wide Area Networks.

Smaller companies will have funds supplied from the EEC and DTI grants to enable them to create products which meet the performance standards.

There is a European MAP users group—EMUG and ICL are canvassing support for a TOP European TOP user group.

There is pressure for another user group to keep US and European standards in line. Any standards which depend on a large number of companies each with its own vested interests, agreeing to laid down specifications are bound to take a long time before anything appears which is helpful to the end user.

However, the X400 standard for electronic mail may be the first step in the right direction.

Paperless office slow to arrive

CONTINUED FROM PAGE 1

data storage devices and so on, on a single site.

The US study indicated that although penetration of such systems in the banks was very low, future plans called for the adoption of multi-function workstations with a wide variety of capabilities — implying a substantial use of local area networks.

It also gives fresh importance to the search for a single, international standard for the interconnection of computer systems of different makes. Most of the banks use IBM equipment and its proprietary SNA (systems network architecture) standard. A complete definition of the international standard, OSI (open systems interconnection), is still some years away.

* * *

**Banking Office Automation, Frost and Sullivan Inc, $2,500.*

FINANCIAL TIMES

Monday June 2 1986

Demand growth for 'equity kickers' continues

UNITED BISCUITS Holdings and Eastman Kodak last week joined the ranks of borrowers in the bond market who are taking advantage of the relative strength of the equity-related sector, writes **Clare Pearson in London.**

An equity-related instrument enables a company to obtain funds at a comparatively low rate of interest while placing shares at a premium to the share price at the time of issue. With the current weakness in the fixed-rate debt market, investors are increasingly reluctant to buy corporate paper. The "equity kicker" adds a non-bond element to enhance the value of their investment.

Lead-manager Salomon Brothers International said Eastman Kodak's $275m 15-year 6¾ per cent convertible, which was increased to $300m the day after launch, had been designed to appeal especially to continental investors who were normally buyers of fixed-rate bonds.

United Biscuits equity warrants bond and Eastman Kodak's convertible were quoted at levels around their issue prices. Thus they traded more successfully than the week's fixed-rate offerings. All Nippon Airways, the only corporate borrower in the fixed-rate dollar market last week, saw its $180m 8¾ per cent 10-year bond fall to a discount of more than 4 percentage points below its issue price.

An equity-related structure does not necessarily ensure plain sailing for a new issue, however. Last week's crop of bonds for Japanese borrowers met with varying receptions indicating that investors, who have been oversupplied, were now selective. This was despite a persistent improvement in Tokyo share prices.

In particular, last week's new equity warrants issue of Iseki, the agricultural machinery company almost unknown outside Japan, fell to a bid price of 96 against a par issue price. Meanwhile, a recent issue for Hanwa, the trading company, also floundered, as dealers consider Hanwa an over-frequent borrower.

"Blue-chip" Japanese companies cannot be sure of a favourable response to their equity-related bonds as the strength of the yen has caused foreign-exchange losses to appear on companies' balance sheets. Friday's new equity warrants issue for Fuji Heavy Industries was probably fortunate in being launched on a day when the dollar was weakening against the yen. It finished the day bid at a discount to issue price of 2 per cent.

Dealers were more optimistic about Friday's issue for Uny, the Japanese supermarkets chain because Mr Nakasone, the Prime Minister, is expected to take measures to boost consumer demand.

Japanese investors have been allowed to buy equity warrants bonds by Japanese companies since the beginning of this year, but securities houses say they have been slow to grasp the value of such instruments. Meanwhile, European investors consider that they have been oversupplied.

Nevertheless, given the better performance of equity markets as against bond markets, such instruments still represent means for issuing houses to offset loss-making underwriting positions in fixed rate bonds.

The floating-rate note market represents another means. Opportunities to take advantage of that are, however, limited by the lack of enthusiasm among sovereign issuers for raising large sums at long maturities, and among banks for raising capital by issuing perpetual issues. Thus the week saw only three new issues, although one, for Banco Nazionale Dell' Agricoltura, signalled the reopening of the Ecu floating-rate note market.

EUROMARKET TURNOVER
Turnover ($m)

	Straights	Conv	FRN	Other
Primary Market				
US$	3,083.0	175.7	1,995.1	248.4
Prev	4,082.3	40.2	395.5	382.8
Other	2,070.1	–	–	118.5
Prev	2,703.3	–	0.7	43.1
Secondary Market				
US$	19,872.7	1,047.8	11,082.4	2,211.8
Prev	29,782.4	1,838.6	15,675.3	2,480.4
Other	9,387.9	120.6	2,489.5	3,408.9
Prev	13,227.8	361.7	1,824.8	2,967.4

	Cedel	Euroclear	Total
US$	31,308.8	28,887.3	60,282.9
Prev	14,702.1	37,770.6	52,472.7
Other	8,941.3	9,287.2	18,228.5
Prev	10,683.5	10,478.8	21,158.3

Week to May 29, 1986. *Source: AIBD*

Some slight revival of demand in the dollar fixed-rate sector emerged early last week as the US Treasury market strengthened. Significant falls in Treasury bond prices on Thursday night, sparked by a 1.5 per cent jump in April leading indicators, extinguished that on Friday. Dealers thought it odd that Deutsche Bank Capital Markets chose this moment to launch a $150m 30-year bond for the World Bank.

With increasing uncertainty about the direction of interest rates, investors have been steering clear of long-dated instruments. Deutsche Bank said the bond provided at issue a yield differential of about 80 basis points above the average yield of the Treasury bonds 9¼ per cent and 7¼ per cent 2016. Dealers pointed out, however, that outstanding World Bank bonds of comparable maturities yielded as much as 30 basis points more than that.

A comparable dislike of long maturities is in evidence in the D-Mark sector, where a recent 20-year 6¼ bond for Lufthansa is languishing at a bid price of 95, as against a par issue price. The sector shrugged off the potential shock of the announcement of a DM 16.9bn new issue calendar for June last week, but remained unenthusiastic about new deals. New bonds for the Kingdom of Portugal and Public Power of Greece were quoted outside their fees.

The Swiss franc market, which has been trading under the cloud of high short-term interest rates for some time, was further depressed last week when local banks failed to cut mortgage rates. Amid general indifference to new bonds, however, a recent SFr 200m equity warrants issue for British insurance company Commercial Union traded at 106 bid.

● On Friday, Barclays de Zoete Wedd announced three senior appointments in its international capital markets division. Graham Pooley, formerly an executive director at Bank of America International, is to head up an integrated new issue and swap activity. Andrew Pye is to join from Mitsubishi Finance, where he was a director, to become Head of Syndicate. Clare Grenfell, also formerly at Mitsubishi Finance, is to join the syndicate department.

Debt reprieve won by Dome Petroleum

BY BERNARD SIMON IN TORONTO

DOME Petroleum, the ailing Canadian energy producer, has won another reprieve from its 56 creditors with a temporary agreement to curtail interest and principal payments on the bulk of its C$6bn (US$4.4bn) debt.

Pending negotiation of a new long-term debt restructuring plan, Dome will pay secured creditors on the basis of cash flow available from assets pledged as security for their loans. Unsecured creditors will receive no payments. Dome has also suspended dividends on its preferred shares.

These deferrals remain in force until October 28, with provisions for further extensions to the end of February 1987. Dome will pay the lenders C$2.7m in cash or the equivalent in shares in return for deferring debt payments.

Dome's ability to service its debt has been severely restricted by the fall in oil and gas prices, by a decline in the Canadian dollar, and by a rise in domestic interest rates earlier this year.

Creditors, mainly banks in Canada, the US, Japan and Europe, agreed earlier to waive interest and principal payments until May 29. Meanwhile a new plan was to be worked out to supersede the comprehensive debt-rescheduling agreement signed in February, 1985. Under the 1985 agreement, debt repayments were stretched to 1995.

Dome Mines, Canada's leading gold producer, has suspended its quarterly common share dividend in view of recent losses and its substantial exposure to Dome Petroleum.

Mr Fraser Fell, chairman, told the annual meeting in Toronto that the company aimed to eliminate its C$130m debt.

EdF $600m deal sets benchmark low for facility fees

THE long-awaited $600m loan facility for France's electric utility EdF finally surfaced on Friday, writes **Peter Montagnon in London.** As expected, the terms set a new benchmark low-facility fee for top-ranking sovereign borrowers, breaching the five-basis-point level for the first time.

The facility, led by Citicorp, Credit Lyonnais, Deutsche Bank and Industrial Bank of Japan, is a straight forward revolving credit which will replace other deals used to back up short-term commercial paper borrowings.

It carries an annual commitment fee of four basis points for the first three years, rising to five for the next seven. Drawings will bear interest at the London interbank offered rate for Eurocurrency deposits plus a utilisation fee of up to 12½ points, depending on how much is taken up.

EdF was clearly influenced by the success of the recent $500m facility for Spain, which bears a five-point annual fee in pricing its new deal, but the terms break new ground. Only large corporations such as Nestlé, Unilever and BHP, which offer substantial ancillary business to their banks, have yet breached the five-basis-point level.

The terms therefore attracted some scepticism in the market on Friday. Bankers pointed out that Spain was exceptional because it had no other deals outstanding, whereas there were several billion dollars in standby credits outstanding for French state borrowers. Those can be picked up at better rates in the secondary market.

However, EdF made a point of insisting on an exceptionally strong group of lead managers for its deal. Another sign of its cautious approach is that in contrast to previous operations the market is not being encouraged to expect an increase, although EdF was originally looking at a $1bn requirement.

The fact that the lead group has been put together without the acrimony surrounding last December's facility for Gaz de France (which bore a five-basis-point fee) may also help, as may the structure, which is stright forward and easy to understand, unlike an intervening $660m facility for the state railways, SNCF.

Other new deals include a $100m, eight-year credit for Czechoslovakia's Foreign Trade Bank that confirms yet again how fine are the terms at which the best-rated Comecon borrowers can now raise money. The deal, led by National Westminster, carries interest at a margin of ⅛ per cent above the London interbank offered rate for the first four years rising to ¼ per cent thereafter. There is a commitment fee of ⅛ per cent on undrawn amounts.

In the corporate sector Nike, the US sports equipment manufacturer, is seeking a $100m facility led by Citicorp. This is a seven-year deal and carries an annual facility fee of 12½ basis points during the first five years rising to 15 points thereafter. Drawings under the accompanying back-up credit will bear interest at a margin of 20 points rising after five years to 25 points with an additional 7½ point fee if more than half is used.

After signing its $370m loan on Friday Greece is now concentrating on smaller operations, including bonds in both Germany and Switzerland last week. This should satisfy basic borrowing needs for this year, though Greece could decide later in the autumn to launch another large deal to help refinance next year's maturities, according to Mr Estathios Papageorgiou, deputy governor of the Bank of Greece. These will be a relatively large $1.5bn.

Tourism receipts are little affected by the slowdown in US arrivals to Europe, because the bulk of visitors to Greece are European. But a worrying factor remains the continuing increase in non-oil imports. This was one reason why the first quarter current account balance of payments deficit declined only 23 per cent to $600m. Greece wants to wait until better figures are to hand before launching another major operation.

When it does so a question mark will still hang over Japanese bank participation. Japanese institutions took only 23 per cent of the latest loan and many say they are at or near their country limit. Many have lent heavily to Greece in yen in the past and the currency's appreciation is making country limits even tighter.

The Central Bank of Turkey has arranged a one-year $150m commercial paper facility to back up issues in the US. Sumitomo Bank is agent on the deal and issuer of the master letter of credit. Terms include an annual ¼ per cent fee and a front-end fee of 60 basis points for takers of $10m.

Downpayment for San Miguel shares seized

BY SAMUEL SENOREN IN MANILA

THE United Coconut Planters Banks has seized a downpayment of 500m pesos ($25m) from Mr Andres Soriano III, chairman of San Miguel, the Philippines' largest food group, on the grounds that he failed to complete the purchase of 33.1m stocks in the company.

The downpayment was part of the total agreed price of $165m which Mr Soriano was to pay the bank on behalf of Neptunia, a foreign subsidiary of San Miguel. The bank is the trustee of the Coconut Fund which owned the shares.

The bank also demanded that Mr Soriano return the shares which were transferred to his control but later seized by the Government on suspicion they were owned by Mr Eduardo Cojuangco Jr, a known associate of former President Ferdinand Marcos and former chairman of San Miguel.

Mr Soriano had told the bank that Neptunia could not be held liable for the failure of the transaction because the shares involved had been seized by the Government.

The chairman of the bank, Mr Juan Ponce Enrile, who is also Minister of Defence, has maintained that the disputed shares did not belong to Mr Cojuangco but to 1.4m coconut farmers.

The ownership dispute has led to a postponement of the election of the directors of San Miguel. The Government was in a position to control the board, based on the disputed shares, plus another 20m San Miguel shares seized from Mr Cojuangco's companies.

CORPORATE FINANCE

Electrolux brings major innovation to Italy

ELECTROLUX of Sweden, the world's largest manufacturer of household appliances, will break new ground on the Italian stock-market during the next fortnight with an innovative share offer designed to raise around L70bn ($44.2m). The Italian equity offer, which is part of an ambitious $275m international placement in nine different capital markets, brings a major innovation to Italy in terms of the instrument being used, the "Italian Depository Receipt"

The IDR, invented by Mediobanca, the Milan merchant bank which is lead-managing the Italian part of the world-wide Electrolux offer, is a carbon copy of the ADR schemes used in the US. The IDR launch will mark the first time foreign equity will be made available to Italian investors without the need, under Italy's exchange control regulations, to pay a 25 per cent non-interest bearing deposit on foreign investments.

This fact alone is highly significant and follows only a few months after another breakthrough, the Swiss franc foreign bond for Olivetti which was opened to Italian investors without the 25 per cent deposit requirement. At the time Italian monetary authorities said in private that the Olivetti bond was "an experiment" designed to pave the way toward an eventual liberalisation of Italian foreign exchange controls. While not directly comparable, the Electrolux IDR issue is another big step in the same direction.

The Lira proceeds of the Electrolux issue will be used by the Swedish group to make investments at Zanussi, the leading Italian white goods producer acquired at the end of 1984. Zanussi is to be consolidated into Electrolux later this year, with the Swedish company converting bonds and buying out other Zanussi shareholders such as Fiat and Mediobanca. The plan is for Electrolux to control around 90 per cent of Zanussi by the year, end against the 49 per cent it holds

For some months now the Italian Government has been seeking ways of relaxing exchange controls. Industrial leaders such as Mr Gianni Agnelli, the chairman of Fiat, have pointed out that, with Italy's current economic upturn, the time is ripe for action by the authorities. The invention of IDRs by Mediobanca is thus a way to start down the road toward greater freedom for capital flows.

The IDR scheme is also relatively safe as an experiment because the proceeds, in theory, will not even leave the country. It has been learned that even before the launch of the Electrolux offer of 1.2m IDR certificates (to be priced at around L60,000 each), other multinational companies with Italian operations are thinking of following suit. The Electrolux-Mediobanca deal becomes immediately, therefore, a key test case for the IDR formula.

The total international Electrolux equity offer is being co-ordinated by Enskilda Securities, the London investment banking subsidiary of Skandinavska Enskilda Banken. Aside from Italy, shares will be sold in the UK, the US, West Germany, Switzerland, France, Canada, the Far East and the Netherlands.

The selling group, to be led by Mediobanca, will include Banca Commerciale Italiana, Credito Italiano, Banco di Roma, Banca Nazionale del Lavoro, SIGE (the investment banking arm of IMI) and Credipar (a subsidiary of Crediop).

Individual investors will be allowed to subscribe a minimum of 50 IDRs (costing L3m) and a maximum of 500 IDRs. Institutions will not have formal limitations. The IDRs will not be admitted to the bourse with a full listing, but will be traded on the grey (unofficial) market. This, however, should not affect the liquidity of the secondary market.

The Electrolux deal, which in its entirety is close to the size of the largest Euro-equity issue ever made (KLM's $304m offer earlier this year), thus suits the purposes of the company and the Italian authorities. It could easily be a harbinger of things to come.

Alan Friedman

Heavy net losses for Japanese shipbuilders

BY YOKO SHIBATA IN TOKYO

FOUR JAPANESE shipbuilding companies, Kawasaki Heavy Industries, Hitachi Zosen, Mitsui Engineering and Shipbuilding and Sumitomo Heavy Industries, have reported parent company net losses for the year ended March 31 and passed their dividends.

The deficits come despite large gains on the sale of securities and reflect intensified competition for orders which has caused most Japanese shipyards to operate below break-even. In addition, the upsurge in the value of the yen has put profit margins under renewed pressure.

Kawasaki reported pre-tax profits of Y500m ($2.8m), down from profits of Y5.6bn a year earlier and a net loss of Y3.65bn, against profits of Y5.85bn. Total sales slipped from Y715bn to Y702.7bn, but plunged 42 per cent in the shipbuilding division. The yen's appreciation reduced profit margins on motorcycle exports. Total exports fell by 11.9 per cent to Y258bn.

At Hitachi Zosen, there was a loss of Y20.6bn, compared with net profits of Y6.04bn last time, as sales fell from Y420.4bn to Y358bn. The loss was struck after a Y5.1bn asset sale gain.

The company also set aside Y33.9bn in extraordinary losses to finance retirement payments for employees forced to leave the company because of the downturn.

Shipbuilding orders at Mitsui totalled just six vessels in 1985-86, the lowest for 15 years. The company posted a net deficit of Y2.8bn, against profits of Y4.6bn a year earlier, while sales slipped from Y329.7bn to Y284.7bn.

The company plans to cut 2,000 jobs in the current year, and, despite further sales of securities, deficits are expected to increase.

Sumitomo made a net loss of Y7.34bn, against profits of Y2.51bn in fiscal 1984. The latest figures reflect a Y8.7bn liquidation loss in its construction machinery subsidiary. The pre-tax loss was Y500m, and is expected to rise because of the appreciation of the yen and the shipbuilding recession.

Three other diversified Japanese groups which have shipbuilding divisions fared slightly better. Mitsubishi Heavy Industries posted pre-tax profits of Y58.2bn, down 33 per cent, Ishikawajima-Harima Heavy Industries reported pre-tax of Y13.2bn, down 24.6 per cent, while steel producer Nippon Kokan saw pre-tax profits more than halved to Y15.5bn.

More state takeovers in South Korea

By Steven B. Butler in Seoul

THE SOUTH KOREAN Government has taken another major step towards the rationalisation of insolvent companies with the announcement of nine corporate takeovers.

The plan involves five subsidiaries of the Kukje-ICC group, which failed last year under the burden of heavy debts, and four companies belonging to Samho International, a construction group that failed in 1984 in part due to a decline in business from the Middle East.

The Kukje companies, which include a range of trading and manufacturing concerns, will be split. The Samho International companies will be taken over together by Daelim Industrial Group, which is dominated by construction interests.

As in a previous set of government-engineered mergers announced earlier in the month, the takeovers will be accompanied by substantial tax and financing benefits to help compensate for the negative net worth of some of the companies involved.

Daelim will be taking over some 290bn won ($326m) of Samho's debts, but it will be allowed to repay the funds over 15 years after a 10-year interest-free grace period.

VNU seeks sale of Dutch pay-TV stake to Esselte

VERENIGDE Nederlandse Uitgeversbedrijven (VNU), the Dutch publishing company, is negotiating to sell its 40 per cent stake in Filmnet, the only Dutch private pay-television network, to Esselte of Sweden, which already has a 40 per cent stake.

VNU said the decision to sell its share came on differences among the joint-venture partners over funding and future growth plans for the year-old concern.

Filmnet is based in the Netherlands and broadcasts movies on a subscription basis. The other 20 per cent is held by United International Pictures, a US-based film group.

VNU said it expects the transaction to be completed successfully with Esselte and aims to finalise the agreement by July 1.

VNU did not place a value on the sale of its stake. But the company said it had invested a "substantial amount" of money in the venture.

The planned disposal is not expected to hurt VNU's earnings prospects for 1986.

AP-DJ

Spanish telephone group plans convertible bond

TELEFONICA, the partly state-owned Spanish telephone company, plans a Pta25bn ($170m) convertible bond, partly to be placed abroad in pesetas.

The company said that the issue will be in June or July, pending Finance Ministry authorisation. Several US investment banks were interested in acting as placement agent, Telefonica said.

The bonds will be convertible into shares three, six or 12 months from the issue date at 175 per cent of nominal share value or at 10 per cent below prevailing market price. Telefonica's shares have this year risen around 60 per cent on the Madrid stock exchange.

The company's shares were listed on the London, Tokyo, Frankfurt and Paris stock markets last year following an international placing of Telefonica equity.

Reuter

Norwegian oil groups might merge

ELF AQUITAINE Norge, Norwegian off-shoot of the French petroleum and industrial group, and Saga Petroleum, an independent Norwegian oil company with stakes in most of the country's most promising offshore discoveries, said at the weekend they had for some time been discussing a possible merger, writes *Fay Gjester in Oslo*. However, both added that nothing had yet been decided.

Saga, although relatively small (its 1985 turnover was NKr 1bn - $130m) is backed by most of Norway's leading industrial, shipping and financial groups. Because of its national character, it is one of a trio of oil companies (with Statoil, 100 per cent state-owned, and Norsk Hydro, 51 per cent state-owned) wich has received specially favourable treatment in successive Norwegian licencing rounds.

Its merger with a foreign-owned firm would have to be approved by the Oslo Government. According to Mr Arne Øien, Oil Minister in the present minority Labour Cabinet, it is too early to say how he and his colleagues would view a merger

● Elf has been conducting secret talks with Statoil, Norway's national oil company, about an export deal involving gas from the Norwegian Sleipner field.

NEW INTERNATIONAL BOND ISSUES

Borrowers	Amount m.	Maturity	Av. life years	Coupon %	Price	Book Runner	Offer yield %
U.S. DOLLARS							
Alex Brown & Sons §‡	25	2001	15	5¾	100	Kleinwort Benson	5.750
Alps Electric ¶‡	150	1993	7	3	100	Nomura Int.	3.000
Alps Electric ¶‡	50	1993	7	3	100	Daiwa Singapore	3.000
Hanwa Co. ¶‡	80	1993	7	3⅛	100	Daiwa Europe	3.125
Iseki & Co. ¶	70	1991	5	(2⅞)	100	Nikko Secs. (Europe)	*
All Nippon Airways ‡	100	1996	10	8¼	100½	Chase Manhattan	8.175
New Zealand ‡	100	1990	4	7¾	100⅛	CSFB	7.713
New Zealand ‡	100	1993	7	8	99¼	CSFB	8.145
Italian Int. Bank (c)†‡	30	1996	10	3/16	100	Svenska Int.	–
Danish Ex. Fin. Corp. ‡	100	1991	5	8	100¾	Morgan Guaranty	7.813
MB Finance ¶‡	75	1996	10	6½	100	Morgan Grenfell	6.500
Eastman Kodak §‡	300	2001	15	6⅜	100	Salomon Brothers	6.375
Orient Leasing ¶	60	1991	5	(2¾)	100	Daiwa Europe	*
Alco Health Services §	100	2001	15	(6–6½)	100	Drexel Burnham Lambert	*
Prov. of Nova Scotia ‡	100	1988	3	8	101	UBS (Secs)	7.615
SNCB ‡	50	1992	5½	8⅛	100⅝	Mitsubishi Fin. Int.	7.982
Fleet Fin. Group (d)†‡	100	1998	12	10bp	100	Salomon Brothers	–
World Bank ‡	150	2016	30	8½	100¼	Deutsche Bk Cap. Mkts	8.477
Mitsubishi Petrochemical ¶	70	1993	7	(3⅛)	100	Nikko Secs. (Europe)	*
Sony Co. ¶	60	1991	5	(2¾)	100	Nomura Int.	*
Fuji Heavy Ind. ¶	150	1993	7	(3⅛)	100	Yamaichi Int. (Eur)	*
Fuji Heavy Ind. ¶	50	1993	7	(3⅛)	100	Daiwa Singapore	*
CANADIAN DOLLARS							
Quebec Urban Comm. ‡	35	1996	10	9½	100½	BNP	9.421
AUSTRALIAN DOLLARS							
Kawagai Australia Fin. ‡	40	1991	5	13⅝	100	Banque Indosuez	13.625
D-MARKS							
Kahori Jukon. ¶‡	40	1991	5	1	100	Commerzbank	1.000
Ind. Bk of Finland ‡	125	1992	6	6¼	100	BHF-Bank	6.250
Portugal ‡	200	1994	8	6⅝	100¼	Commerzbank	6.584
ECSC **‡	75	1992	4.75	5⅝	100	Deutsche Girozentrale	5.625
Banque Leu (Lux) ¶	100	1996	10	2½	100	BHF-Bank	2.500
Public Pwr Corp. Greece ‡	150	1993	7	6¾	99½	Bayerische Vereinsbk	6.842
SWISS FRANCS							
Bank of Greece	100	1994	–	(5½)	(99)	B. della Svizzera Ital.	*
Emeach Corp. **‡	100	1993	–	5	99½	UBS	5.087
Meisei Ind. **‡	30	1991	–	4¾	99¾	Handelsbank	4.808
STERLING							
Hessische Landesbank ‡	50	1991	5	9⅛	100¾	Samuel Montagu	8.933
BNP ‡	50	1993	7	9	99⅞	Kleinwort Benson	9.025
ECUS							
BNA (London) (a)†‡	100	1993	7	1/16	100	CIBC	–
Nippon Tel. & Tel. ‡	130	1993	7	7	100¾	Banque Paribas	6.862
FRENCH FRANCS							
Peugeot ‡	1bn	1996	10	8	100	BNP	8.000
LUXEMBOURG FRANCS							
Jokon Kosan **‡	300	1991	5	7¼	100	Kredietbank Int.	7.250
Nakabayashi Co. **‡	300	1992	6	7½	100	BGL	7.500
DANISH KRONER							
Fin. for Danish Ind. (b)‡	500	1996	10	9	101½	Sparekassen SDS	8.769
LIRE							
EIB ‡	150bn	1994	8	10½	99¾	Italian Int. Bank	10.548

*Not yet priced. ‡ Final terms. ** Private placement. § Convertible. † Floating rate note. ¶ With equity warrants. ɸ With bond warrants. (a) 1/16 over 6m Libor, first 5 yrs, ⅛ last 2 yrs. (b) Additional DKr 500m tap. (c) 3/16 over 6m Libor. (d) 10bp over 3m Libor. Note: Yields are calculated on AIBD basis.

US MONEY AND CREDIT

Bonds plunge on hints of economic upturn

READING the domestic economic tea-leaves has once again become the primary concern of the US credit markets, at least for now.

Last week US credit market investors brushed aside the positive implications of a firmer (steadier) dollar and a renewed decline in crude oil prices back down to around the middle $14 a barrel range. Instead they focused on US economic data which appeared to hint that the long-awaited upturn was nigh—and ran for cover.

After an uncertain resumption of trading after the extended Memorial Day holiday weekend, bond prices plunged amid growing concern that an economic reaccleration would sound the final death-knell for lower interest rate hopes.

The credit market's jitters were compounded by the equity market's somewhat ambivalent, but nevertheless record busting strength and by the poor retail reception for the $7.75bn of five-year Treasury notes sold last Wednesday at an average yield of 7.53 per cent.

By the weekend the five-year notes were yielding 7.84 per cent while the Treasury long bond price had plunged by more than 3½ points sending its yield spiralling back towards the 7.80 level.

The market's worst fears were confirmed, at least superficially, on Thursday by the Commerce Department's announcement of a much larger than expected 1.5 per cent increase in the April index of leading economic indicators—the biggest gain since October 1983.

The news helped squash many hopes of an early Federal Reserve Board easing move and put another question mark against predictions from senior Wall Street economists, including Dr Henry Kaufman of Salomon Brothers and Dr Albert Wojnilower of First Boston, both of whom have suggested the Fed could move this month to cut the discount rate, which stands at 6.5 per cent.

But the reaction of the credit markets to the current round of economic data may say more about the overriding jittery market mood than about either the underlying state of the economy or the reliability of the data itself.

Like the restated first-quarter GNP number, the April leading economic indicators, on closer inspection, say as much about weakness as strength in the US economy—a factor permiting some senior economists to dub the April data "the misleading index."

Such doubts are shared by others. Dr Kaufman, for example, termed market reaction to improving economic indicators and concerns that monetary policy may be becoming less accommodative "exaggerated on both counts."

Fighting the numbers and the underlying caution of retail investors is a new role for Wall Street market watchers, but one which they are embracing with conviction and gusto. "While the market retreat can proceed somewhat further," says Philip Braverman of Irving Securities, "fundamentals will inevitably produce a renewed rally."

Like other Wall Street economists, Mr Braverman expects some increase in US economic growth in the second half, but he believes current data are overstating the rebound and is sticking to his forecast of modest 2.0 per cent real GNP growth in the current quarter and a new Fed easing "in July or August."

That should all be reassuring for the US credit markets, but retail investors at least do not seem to see it that way.

The recent retail rush for the sidelines has left dealers holding large inventories—on top of sizeable losses on arbitrage trades involving the old 9¼ per cent long bond.

Overall government bond prices fell by between ½ and 4 full points in last week's holiday-shortened trading week. The losses were largest at the long maturity end, but intermediates also lost up to 1⅞ points raising yields by 20 basis points on average and keeping the yield curve relatively tight and flat.

In the money markets most short-term interest rates rose by between 7 and 17 basis points with Treasury bill rates generally posting the largest gains. The firmer rates helped underpin the dollar's continued rebound from its lows in mid-May.

While the government sector took the brunt of the markets uncertainties, the corporate markets were also hit. Corporate bond prices fell by 1⅞ to 2 full points last week while new issue yield levels rose by 20 to 25 basis points on medium-term notes and by 15 to 38 basis points on long-term bonds.

According to Smith Barney, new issues of straight debt created liabilities of $1.2bn. Among the new issues were a $300m 9.5 per cent offering of 30-year bonds by Ralston Purina priced to yield 9.75 per cent, and a $300m offering of 9⅜ per cent long bonds by Chevron priced to yield 9.514 per cent. Among debt rating changes, Moody's swooped on the finally tied-up merger agreement between Burroughs and Sperry downgrading both companies senior debt to Baa2 and subordinated debt to Baa3.

Paul Taylor

US MONEY MARKET RATES (%)

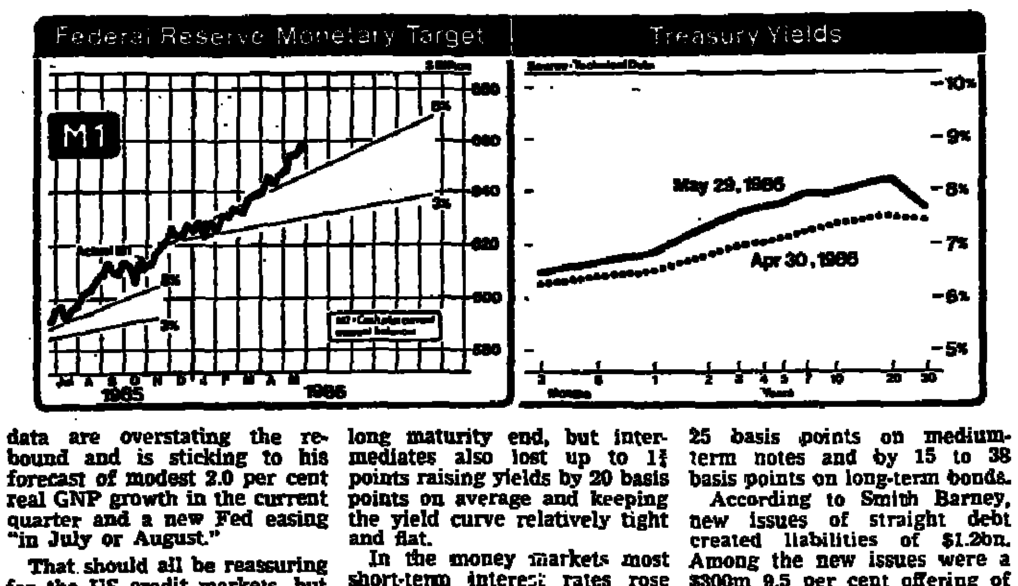
	Last Friday	1 week ago	4 wks ago	12-month High	12-month Low
Fed Funds (weekly average)	6.89	6.87	7.06	8.91	6.79
Three-month Treasury bills	6.30	6.17	6.11	7.40	5.78
Six-month Treasury bills	6.40	6.23	6.13	7.48	5.79
Three-month prime CDs	6.82	6.75	6.56	8.10	6.42
30-day Commercial Paper	6.70	6.70	6.70	8.05	6.38
90-day Commercial Paper	6.65	6.65	6.55	8.00	6.25

US BOND PRICES AND YIELDS (%)

	Last Friday	Change on week	Yield	1 week ago	4 wks ago
Seven-year Treasury	96½	−1¼	8.04	7.80	7.28
20-year Treasury	108¾	−3¾	8.41	8.09	7.61
30-year Treasury	94	−3¾	7.77	7.45	(new)
New 10-year "A" Financial	N/A	−1¼	9.20	8.95	8.79
New "AA" Long utility	N/A	−1½	9.40	9.25	9.13
New "AA" Long industrial	N/A	−3½	9.10	8.88	8.88

Source: Salomon Bros (estimates).

Money Supply: In the week ended May 19 M1 rose by $2.6bn to $658.9bn.



FT/AIBD INTERNATIONAL BOND SERVICE

US DOLLAR STRAIGHTS	Issued	Price	Chg. on week	Yield
AHFC O/S Fin 11⅞ 94	100	105⅞	+0⅛	10.60
AIDC 11 89	75	106⅝	−0⅛	8.25
Alcan Australia 9½ 89	25	98⅞	−0⅛	8.94
Amer Savings 12 89	125	104⅞	−0⅛	9.91
Amer Savings 12⅝ 89	100	105⅞	+0⅛	9.86
Asian Dev Bk 11⅝ 93	100	115⅛	−1⅛	8.87
Australia 11⅝ 90	100	113⅞	−0⅛	7.59
Australia 11½ 95	300	116⅝	−1⅛	8.79
Australia 11⅝ 98	100	121⅛	−1⅛	8.75
Austria 15½ 88	75	111⅞	−1	8.14
Avon Fin 10⅝ 92	100	103⅛	−0⅛	8.46
[illegible]				
Nova Scotia 11⅞ 98	100	113	−0⅛	9.81
Oester Post 12⅞ 89	75	109⅜	−0⅛	8.48
Ontario Hydro 11⅝ 94	200	117	−0⅛	8.51
Ontario Hydro 11⅝ 90	200	112	−0⅛	8.37
Ontario 12½ 94	250	113	−3	9.26
Orient Fin 11 92	60	108	+1	9.09
Pacific Gas & El 12 00	75	112⅛	−2⅛	10.25
Penney J C 11⅞ 90	100	105⅛	−0⅛	10.28
Penney J C 12⅝ 91	100	112⅜	−0⅛	9.59
Phillips Petrol 14 89	200	101⅛	+0⅛	13.16
Postipankki 11⅛ 90	75	106⅛	−0⅛	9.04
Post-Och Kred 13½ 87	50	106½	−0⅛	7.40
Privatbanken 12⅛ 95	100	117⅞	−0⅛	8.38
Prudential Ins 12⅝ 87	150	106⅞	+0⅛	7.42
Pru Rlty Secs 0 99	365	34	−0⅛	8.92
Pru Rlty Secs 11⅞ 92	385	108⅛	−0½	10.29
Pru Rlty Secs 11⅛ 95	545	114½	0	9.56
Quebec Prov 12⅝ 94	150	113½	−0⅛	9.65

	Issued	Price	Chg. on week	Yield
Queensland Gvt 11⅝ 89	100	108⅛	−1	8.43
RBC 11⅞ 90	100	107⅞	−0⅛	8.73
Rural Bk Aust 12 91	50	110⅛	−0⅛	9.16
Sanwa Bank 11⅞ 92	150	111½	−0⅞	9.14
Sanwa Intl 11½ 92	100	112⅛	−0⅛	8.71
Saskatchewan 10⅝ 92	100	109⅞	−0⅛	8.49
Saskatchewan 10⅝ 90	125	108⅛	+0⅛	8.09
Saskatchewan 11⅞ 88	100	110½	−0½	8.22
Saskatchewan 15 92	150	128⅛	−0⅞	8.87
Saskatchewan 16 89	125	118½	−0⅛	8.27
Scot Intl Fin 14⅝ 96	50	117½	−1	11.25
Sears O/S Fin 0 98	500	34½	−0⅛	9.18
Sears Roebuck 10½ 91	150	105⅞	−0⅛	9.19
Sears Roebuck 11⅝ 91	150	111⅛	−0⅛	8.48
[illegible]				
Tokai Asia ⅛ 99	150	100⅞	0	8⅛
Toyo Trust Asia ⅛ 99	100	100⅛	0	8⅛
UBAF ¼ 90	85	99⅞	0	8⅛
Union Bk Finland ⅛ 34	100	99⅞	+0⅛	7⅛
Union Bank-Norw ⅛ 99	50	99	0	8⅞
United Kingdom 92	2.5bn	100⅛	+0⅛	7⅞
Wells Fargo ⅛ 94	150	99⅞	0	7[illegible]
Wells Fargo ⅛ 96	60	99⅞	0	7⅛
Yorkshire Int ⅛ 94 £	75	100	0	11⅛

CONVERTIBLE BONDS	Issued	Price	Chg. on week	Prem.
Ajinomoto 3 99	120	231½	+19⅛	−8.23
Best Denki 6⅞ 97	15	263⅛	−3⅛	−4.15
Canon 7 97	50	256⅛	+3⅛	0.97
Daiwa Secs 5½ 98	60	470	+2	−5.50
Elders 11⅛ 94	160	131½	+0⅛	−6.06
Elektrowatt 5 99	51	139⅛	−0⅛	−6.99

	Issued	Price	Chg. on week	Yield
Fuji Bank 2⅛ 00	100	126⅛	−0⅛	0.08
Fujitsu 3 99	180	120⅞	−1⅛	1.80
Intec Inc 3 99	50	185	+8⅛	−2.77
Kyowa Hakko 5⅛ 97	40	346⅛	−9⅛	−4.48
LASMO 9⅛ 99	44	86⅛	0	108.78
Moet-Hennessy 7 99	80	163⅛	−20	−89.30
Murata Mfg 3½ 00	100	162⅞	−3⅞	21.73
Nippon Oil 3⅛ 99	50	148	−4⅛	−2.38
Ono Pharm 3⅛ 98	60	182⅛	+4⅛	−5.21
Soc Gen Surv 4½ 94	50	187⅞	+2⅛	−3.86
Sumitomo Corp 2⅞ 99	70	180⅛	+0⅛	−2.52
Texaco Capital 11⅞ 94	1bn	105⅛	+0⅛	59.89
Texaco Capital 11⅝ 94	500	105⅛	0	60.08
[illegible]				
Swiss Bnk Cpn	20/12/88	125⅞	−1⅛	5.61
Tokyo Electric	14/3/89	31	0	21.23
Union Bk Switz A	30/11/88	28⅛	+1⅛	27.35

BOND WARRANTS	Expiry date	Price	Chg. on week	Ex. yield
Aegon Ins 11⅛ 91	15/2/88	85	+2⅛	9.05
Coca-Cola 11⅛ 91	28/11/88	108½	+1	8.77
Dai-Ichi K 6½ 96 S	1/1/96	22½	0	8.18
Du Pont 13⅛ 89	25/8/88	122½	+0⅛	8.71
Eksportfins 13⅛ 89	15/9/87	127½	+3⅛	8.60
Gen Elec 12⅛ 91	7/8/87	122⅛	+10⅞	9.62
Ind Bk Jpn 12⅞ 91	5/10/89	167½	+9	9.00
ITT Finance Corp	16/11/89	180	−7⅛	9.51
McDnlds 11⅛ 94	5/1/89	92½	−2⅞	9.35
Oester Lnbk 13½ 89	9/8/87	113⅞	−6⅛	9.18
Texaco Cap 12⅞ 92	1/9/87	73⅛	+1	−3.38
Trnto Dom 12½ 91	5/4/88	127½	−7	8.37

STRAIGHT BONDS: Yield to redemption of the mid-price. Amount issued is expressed in millions of currency units except for yen bonds, where it is in billions

FLOATING RATE NOTES: US dollars unless indicated. Margin above six-month offered rate († three-month; § above mean rate) for US dollars. C.cpn=current coupon.

CONVERTIBLE BONDS: US dollars unless indicated. Prem=percentage premium of the current effective price of buying shares via the bond over the most recent share price.

WARRANTS: Equity warrant prem=exercise premium over current share price. Bond warrant ex yld=exercise yield at current warrant price.

† Perpetual.

Closing prices on May 30.

UK GILTS

Lawson fails to quell doubts on recovery

IT HAS BEEN a rough, if short week for the UK gilts market. Thursday was enough to reverse *any slight gains made in the* first half of the week, while Friday put paid to any hopes of staying ahead.

Although the index-linked tap, 2½ per cent 2013, ran out at £94⅞ on Wednesday, its exhaustion did little to lift this sector of the market, which suffered along with its conventional cousin, though not as severely. And in the low coupon area, the Treasury 3 per cent 1991 was undersubscribed at tender and allotted in full at £86.

Mr Nigel Lawson, the Chancellor of the Exchequer, did his best to cheer everyone up with a bullish speech to economic attaches at London embassies. Unfortunately, his assurances that the recovery was not yet over coincided with the publication of the April trade figures. Although these made a pleasant change from the previous month's stupendous *visible trade deficit, the* bulk of the improvement came on the import side of the *balance—further proof, if any were needed, of the slowdown* in activity that the UK has experienced so far this year.

There are good reasons for expecting a recovery in the second half of the year, as Trea*sury officials are keen to point* out. With the Tax and Price Index showing a year-on-year *increase of only 1.2 per cent* and average earnings rising by 7½ per cent a year, there should *be plenty of cash in consumers'* pockets.

Mortgage rate cuts, too, will *boost spending power.* According to the Halifax Building Society, the average homeowner *with a £20,000 mortgage will* from June 1 be paying £27.19 a month less than they did before interest rates started to fall in April 1985.

For those with bigger mortgages, *however — and* this means largely for those in the opulent South East of England — *the gains are much greater,* since the ending of interest rate premiums on large loans and *on endowment mortgages* has brought further cost reductions. On a £50,000 mortgage, the Halifax says, the monthly repay*ments have fallen over the same* period by a princely £166.66.

Even with all this extra *potential demand, however,* activity is not yet showing signs of picking up very markedly. The monthly Confederation of British Industry trends survey for May, published this morning, reports that the improvement, though welcome, is still very patchy. Order books are reported to be well below normal.

According to Mr Geoffrey Dicks and Mr Bill Robinson of the London Business School, this slowdown was to be expected as a result of the fall in oil prices. It is in effect, the mirror image of the initial expansion that followed the oil price rise of 1979.

They argue that buyers are postponing their purchases of goods in the expectation that prices will come down in the wake of lower oil costs. Certainly, there is some evidence of destocking, although the CBI survey *suggests more than adequate* stocks. They also argue that the upturn, when it comes, will *be spectacular.* For the world as a whole, a growth rate of over 4¼ per cent is projected for 1987.

Others are less boisterous in their projections for next year. Broker Phillips and Drew forecasts a rise in gross domestic product of 2¼ per cent, after 2 per cent in 1986, while its competitor Scrimgeour Vickers sees growth of 2¼ per cent this year falling to 2 per cent in 1987. The Organisation for Economic Co-operation and Development, meanwhile, is rather eccentrically forecasting growth at an annual rate of 3¼ per cent for the first half of this year slowing to 2¼ per cent *for the next 18 months.*

At that rate the prospects of making much of a dent in unemployment look slim. The gilts market may move more on the strength or weakness of the US than of the UK economy but investors are now asking what rising unemployment could do to stir up the political risk factor which is already present at the City's *lunch tables, if not yet in the* market.

George Graham

Near £20m valuation on Lopex flotation

BY ALICE RAWSTHORN

Lopex has become the latest in the recent rush of marketing services groups to join the stock market through a flotation, which will capitalise it at £19.5m.

Originally part of the London Press Exchange, one of the oldest advertising agencies in the country, Lopex was founded in 1970 after the LPE's merger with the US advertising agency, Leo Burnett.

Since 1970 Lopex, has, through a series of start-ups and acquisitions, diversified into six core areas of activity—marketing support, research, consumer advertising, specialist communications, public relations and computer services—and now operates in nine countries.

Within the UK its operations include the St James's public relations consultancy, the Kirkwoods advertising agency, and the media monitoring service.

Overseas activities have become increasingly important to Lopex, however, and should provide 53 per cent of profits in the 1986 financial year.

In 1985 Lopex produced relatively static pre-tax profits of £2.3m — because of problems in its US and South African operations — on turnover of £100m. In the current year it expects to increase profits to £3.2m.

Of the capital raised by the flotation around £1.25m will be ploughed back into the company. According to the chairman and chief executive, Mr John Castle, the capital will be used to reduce borrowings and to aid organic growth.

The flotation will release 3.15m shares, or 23.3 per cent of Lopex's equity, at an offer price of 145p. Kleinwort Benson is the banker to the issue and Panmure Gordon the broker. Dealings start Friday.

● comment

Lopex has approached its flotation in a flurry of Saatchiesque rhetoric about global advertising opportunities and international networking. But behind the rhetoric lurks the suspicion that Lopex is little more than the holding company of a motley selection of businesses which came together by accident rather than design. Lopex has sensibly opted to sell itself to the City as a substantial, rather than a stylish member of the marketing services sector. And, like every sales promotion or marketing consultancy that has ever come to the market, it will suffer from the City's penchant for style over substance. Unfortunately for Lopex it also suffers from the burden of unusually high borrowings—gearing hovers at around 40 per cent—in a cash generating sector. Nonetheless the issue has been priced with these factors in mind and an offer price of 145p and prospective p/e of 15.5 are scarcely extravagant even for one of the sector's less stylish stocks.

FII placing to fund acquisition

FII has arranged to raise I£12.6m (£11.2m) through an institutional placing of 6m ordinary shares of 5p at £2.10 each. This will help fund the purchase of Fyffes from United Brands of the US, and the placing is conditional on that going through.

Cost of the purchase will be £29.9m and will be satisfied by the issue of ordinary and convertible preference shares and cash.

The placing was arranged by DCC Corporate Finance and Citicorp Investment Bank, through Phillips and Drew and J. and E. Davy.

Dixons back on the attack

DIXONS, the electrical retailer which has made a £1.75bn takeover bid for Woolworth Holdings, will today resume its campaign with an attack on what it calls the "failed custodianship" of the present Woolworth management.

The 3½ years during which the current management team has been in place "have been lost years—years of experiment, massive extraordinary and exceptional charges, market share loss, near static sales, declining employment and withdrawal from the high street," Dixons claimed in a letter to Woolworth's shareholders.

It attacked Woolworth's Operation Focus—the concentration on six key areas as "an incoherent hotch potch of product groups Woolworths does least badly in."

If conversion and subscription rights to Woolworth's shares were taken into account and a 35 per cent tax charge is applied to Woolworth's 1985/86 results, earnings per share would have been 28 per cent lower, Dixons said.

Woolworth responded that the improvement in its profits showed what its new management had achieved, while converting stores to its Focus format had led to large sales increases.

Buckley's Brewery profits top £1m

An encouraging increase in wines and spirits and a first time contribution from gaming and amusement machines have enabled Buckley's Brewery to lift its pre-tax profit from £935,000 to £1.04m in the year ended March 29, 1986.

They helped minimise a reduction in beer sales of 7 per cent. Turnover in beer fell to £8.56m (£8.77m) but operating profit was £1.11m (£1m).

Overall operating profit showed an increase to £1.3m (£1.12m) from turnover of £12m (£11.83m) but interest charges were up to £356,000 (£261,000).

Earnings for 1985-86 came to 5p (4.2p) per share and the final dividend is 2.1p for a net total of 2.9p (2.7p).

Chamberlin & Hill

Chamberlin & Hill, which has interests in foundries and electrical engineering, reports slightly lower taxable profits of £531,000, against £562,000, for the year to end-March 1986. Turnover was £11.36m compared with £10.99m.

Earnings per share were 9.01p (9.57p). The final dividend is unchanged at 2.1p for a same-again 3.5p total.

Tax was £212,000 (£223,000), and there were extraordinary debits of £196,000 (£19,000) for closure and relocation costs.

Richards

The growth shown by Richards in the latter half of last year has continued into the current term. For the six months ended March 31, 1986 this Aberdeen-based spinner of high technology yarns has lifted its pre-tax profit from £92,000 to £393,000 on turnover 10 per cent ahead to £7.3m.

Earnings expanded to 2.04p (0.43p) and the interim dividend is 0.6p (0.5p) net.

There is an extraordinary surplus of £1.6m, after capital gains tax, from the sale of 15 acres of land at the Garthdee site.

Pacific Trust dispute

Pacific Investment Trust's status as an investment trust is being disputed by the Inland Revenue. This has arisen from a high level of interest earned due to the degree of liquidity maintained in the early part of its existence.

The announcement was made with the annual figures which showed net asset value of 118.8p at March 31 1986 compared with 104.5p a year earlier. Earnings per share came out at 0.35p (1.23p) and there is a single unchanged final payment of 0.35p net.

F.T. Share Information

The following securities have been added to the Share Information Services:

Abaleen Minerals N.L. (Section: Mines, Australian), Nationwide Building Society 9½pc 27/4/87 (Loans, Building Societies), River & Mercantile Geared Capital & Income Trust 1999 (Ord Inc & Preferred Cap) (Investment Trusts).

Better trend at Common Bros.

FEAR OF terrorism in Europe and the accident at the Chernobyl nuclear power plant have given a boost to Bahama Cruise Line, the main operating subsidiary of Common Brothers. The line was profitable in the six months to December 31 1985 and bookings and revenue projections for this summer are well ahead of last year.

Directors say that the two factors as well as the fall in the dollar are deterring Americans from going abroad and increasing the demand for cruises.

With pre-tax losses much reduced for the period and extraordinary credits of £11.52m, Common Brothers reported an attributable profit for the half year of £10.87m, against a comparable loss of £16m. The extraordinary item was made up of loan cancellation fees, professional and other costs and the reduction in the group's indebtedness which formed part of the capital reconstruction in September last year.

Mr Kristian Siem, chairman, says that the group produced profits before consolidating the losses of IRO Frigg, the other main operating subsidiary.

On turnover down at £14.78m (£19.55m), the pre-tax loss was £630,000, against £17.92m last time, which had included an exceptional write-down of the IRO Frigg drilling ship of £9.66m. Loss per 50p share before extraordinary items came out at 1.8p (266p). There is again no interim payment.

Beecham rationalisation

Beecham, the pharmaceuticals and consumer products group, expects to announce details of its rationalisation programme when it produces preliminary results for the year ended March 1986 on June 12.

It refused yesterday to confirm or deny reports that it plans to sell its home improvements division, including the Copydex and Unibond adhesives products and part of its cosmetics operations.

"All areas of the company have been examined to identify if we want to be in them," the company said. "Some of our recent acquisitions such as British American Cosmetics (bought in December 1984) and Norcliff Thayer (the US medicines group purchased last November) have been doing exceptionally well."

"Some of our non-core businesses, like the Coca Cola bottling operation, also make a lot of money."

Beecham has been conducting a review of its activities since the ousting of Sir Ronald Halstead as chairman in a boardroom coup just over six months ago.

Bulmer & Lumb down

DELAYS IN the build-up of yarn production at its Bolton factory following a fire affected the results of Bulmer & Lumb in the 53 weeks to April 6 1986.

On turnover up from £37.29m to £38.26m, pre-tax profits were almost halved at £914,000 (£1.7m). However retained profit came out 5 per cent higher at £8.12m (£7.75m).

Earnings per 20p share were 8.81p (13.18p). The directors are recommending an unchanged final payment of 3.35p to give a maintained total of 5p.

The pre-tax figure was struck after higher net interest payments of £295,000 (£188,000) and lower exceptional credits of £268,000 (£703,000), relating to the surplus on book value of buildings and plant after the fire. Below the line there were lower extraordinary debits of £40,000 (£340,000).

Nolton ahead to £0.5m

CONTINUED growth in all four of its divisions enabled Nolton, investment holding and industrial management company, to report substantially increased profits for the six months to the end of January 1986 on turnover up by more than 2½ times.

And Mr Andrew Millar, chairman, says that the directors are determined to maintain the growth rate with acquisitions being a management priority.

Pre-tax profits improved from £1,126 to £536,526 on turnover up from £3.48m to £9.4m. After an increased tax charge of £205,666 (£500), a payment to minorities this time of £2,613 and an extraordinary item of £53,022 (nil), earnings per share came out at 1.61p (0.01p). An interim payment of 0.55p (0.75p) is being made on capital increased by the rights issue in August last year.

Berisfords urged to accept

Allied Textile Companies urged shareholders in Berisfords, the ribbon manufacturer, to accept its £8m bid, pointing to a "dramatic collapse" in Berisfords' share price.

Allied said its cash alternative of 127p was way above Berisfords' share price of 106p on Friday. It also cast doubt on a Berisfords' profit forecast for 1986-87.

Acceptances have been received amounting to 1.92 per cent of the increased and final offer. With 0.46 per cent already acquired, it speaks for 2.38 per cent of the Berisford shares.

Allied's share exchange terms of 1-for-2 values Berisford at 125p at Friday's close.

Wm. Cook

With all four foundries achieving excellent performance, the William Cook & Sons (Sheffield) group of steel founders has lifted sales from £7.11m to £10.36m and pre-tax profits from £459,000 to £1.2m in the year ended March 31 1986.

The directors say the record figures begin to reflect the group's real potential following major reorganisation and investment over recent years.

They feel fully justified in raising the year's dividend from 2.75p to 4.5p net, with a final of 2.75p. Earnings were doubled to 13.82p.

Southend Stadium is agreeing in principle to acquire Ten Counties (Ludgate) for a consideration of 1.58m Southend shares. Principal shareholder in Ludgate is Shop Constructions (Holdings) and issue will increase its holding in Southend to 44.1 per cent.

Hunting advances

PROFITS FROM the enlarged Hunting Group have risen from £3.82 to £5.07m for 1985. Earnings are shown at 13.21p against 1.71p, and the dividend is held at 6p net with an unchanged final of 4p.

Below-the-line there are extraordinary charges of £2.84m, being the rationalisation of computer service interests £357,000 (£700,000) and discontinued oil and gas exploration activities £2.49m. Previously, there were credits totalling £3m.

English and International Trust saw net asset value increase to 196.1p compared with 158.2p a year earlier. Net revenue rose to £836,000 (£776,000) with earnings per share of 3.87p (3.53p). The total payment 3.85p (3.5p adjusted) with a recommended final dividend of 2.85p (2.5p adjusted).

FINANCIAL TIMES STOCK INDICES

	May 30	May 29	May 28	May 27	May 23	May 22	1986 High	1986 Low	Since Compilation High	Since Compilation Low
Government Secs.	91.60	92.24	92.47	92.42	92.36	92.15	94.51	80.39	127.4	49.18
Fixed Interest....	96.89	97.15	97.33	97.36	97.26	97.19	97.51	86.55	150.4	50.53
Ordinary.	1321.2	1326.8	1338.4	1324.8	1331.4	1316.3	1425.9	1094.3	1425.9	49.4
Gold Mines	215.1	222.2	222.9	238.1	237.6	228.3	367.0	215.1	734.7	43.5
FT-Act All Share...	788.93	791.45	798.32	791.82	793.73	786.71	838.39	664.42	832.39	61.92
FS.SE100..	1602.8	1609.0	1624.8	1612.1	1617.4	1598.8	1717.6	1370.1	1717.6	986.9

RECENT ISSUES

EQUITIES

[illegible]

FIXED INTEREST STOCKS

[illegible]

"RIGHTS" OFFERS

[illegible]

[illegible] ... on prospectus estimates. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. F. Forecast dividend cover on earnings updated by latest interim statement. H Dividend and Yield based on prospectus or other official estimates for 1987. L Estimated annualised dividend, cover and p/e based on latest annual earnings. R Forecast annualised dividend, cover and p/e ratio based on prospectus or other official estimates. † Indicated dividend; cover relates to previous dividend; p/e ratio based on latest annual earnings. u Forecast, or estimated annualised dividend rate, cover based on previous year's earnings. ¶ Issued by tender. ‖ Offered holders of ordinary shares as a "rights." §§ Introduction. ** Issued by way of capitalisation. § Placing price. ‡‡ Reintroduced. ¶¶ Issued in connection with reorganisation merger or takeover. ‖‖ Allotment price. ✝ Unlisted securities market. ‡‡ Dealt in under Rule 535 (3). ▼ Dealt in under 535 (4) (a) †† Official London listing.

PENDING DIVIDENDS

Dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table. The dates shown are those of last year's announcements except where the forthcoming board meetings (indicated thus*) have been officially notified. Dividends to be declared will not necessarily be at the amounts in the column headed "Announcement last year."

	Date	Announcement last year
Allied Colloids	June 27	Final 1.6
*Amersham Intl	June 16	Final 3.8
Argyll Group	June 11	Final 4.15
*Avana	June 23	Final 6.75
*BPB Inds	June 26	Final 4.6
BTP	June 18	Final 2.3
Beecham	June 12	Final 6.2
British Land	June 20	Final 1.75
*British Telecom	June 19	Final 3.9
*Cable and Wireless	June 25	Final 4.9
*Cape Industs	June 17	Final nil
Centrovincial Estates	June 18	Final 3.0
*Dawson Intl	June 19	Final 5.6
*De La Rue	June 3	Final 21.75%
Electrocomponents	June 10	Final 3.65
Electronic Rentals	July 7	Final 2.065
Ferranti	June 25	Final 1.04
Finlay (J)	June 13	Final 2.15
Fitch Lovell	June 20	Final 6.7
GEC	July 2	Final 2.65
Gt Portland Estates	June 12	Final 5.0
*Hanson Tst	June 3	Interim 1.5
Hazlewood Foods	June 10	Final 11.429
*Hill Samuel	June 5	Final 8.3
IC Gas	June 27	Final 9.25
Intl Signal	June 13	Final 1.5cts
London Intl	June 20	Final 2.6
Land Scottish Finance	June 17	Interim 0.9
*Metal Box	June 10	Final 11.15
Mercury Secs	June 25	Final 16.0
*Meyer Intl	June 17	Final 3.45
*Mitchell Somers	June 19	Final 1.75
*Norcros	June 3	Final 6
*Northern Foods	July 1	Final 3.
Pegler Hattersley	June 5	Final 9.25
*Pilkington	June 11	Sec Int 7.5
*Powell Duffryn	June 2	Final 10.67
Racal Electronics	June 24	Final 2.268
*Reed Intl	June 4	Final 12.75
Rothschild (J)	July 1	Final 1.2
Scottish and Newcastle	July 1	Final 4.19
*600 Group	June 12	Final 3.16
Staffs Potts	May 28	Interim 1.0
Staveley Inds	June 13	Final 11.0
Thorn EMI	July 5	Final 12.5
Trusthouse Forte	June 27	Interim 1.27
*Unigate	June 16	Final 5.2
Union Discount	June 17	Interim 11.0
Valor	June 12	Final due
Whitecroft	June 25	Final 5.4

* Board meeting intimated. † Rights issue since made. ‡ Tax free. § Scrip issue since made. ¶ Forecast.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether the dividends are interims or finals and the sub-divisions shown below are based mainly on last year's timetable.

TODAY

Interims: Hunterprint, Moran Tea.

Finals: Airflow Streamlines, Anglo American Corporation of South Africa, Hanover Investment, Nimslo International, Powell Duffryn, Sims Catering Butchers, TR Natural Resources Investment Trust.

FUTURE DATES

Interims—	
Nottingham Brick	June 10
Reuters	July 28
Finals—	
Borthwick (Thomas)	June 11
Dawson International	June 19
Gee/Rosen Organisation	June 10
M.K. Electric	June 25
Nimslo International	June 2
Rolfe and Nolan Computer Services	June 5
Sterling Publishing	June 3
Walker and Staff	June 26

CONTRACTS

Littlewoods order £7m Honeywell computer

HONEYWELL has received an order for the DPS90 computer placed by Littlewoods, and worth £7m initially. The new system is a triple processor DPS90/93 and includes 50 of Honeywell's large capacity disk storage units, and three Datanet communications processors. Delivery is scheduled for next year.

★

VICARS GROUP (formerly Simon-Vicars) has won a contract worth over £1m from Nabisco Brand in the US, to supply a line of Series 8000 high speed mixers. The company also has an order worth just under £1m to supply a fully coated wafer production line to Yi-Chang Food and Confectionery factory of Hubei Province in the People's Republic of China.

★

TOLLTRECK INTERNATIONAL has won a contract in Canada with CCR, copper and precious metals refining division of Noranda Inc. Worth C$8.9m, the order is for the engineering design and supply of an anode slimes processing system incorporating top blown rotary converter technology. The plant, which will be operational by the third quarter of 1988, will be designed to process up to 34 tonnes per day of anode slimes from the copper refinery and to recover up to eight tonnes per day (250,000 troy oz) of Dore metal. It will be installed in Montreal East, Quebec.

★

Pump sets valued at over £1m are to be installed on the North Sea Tern platform under a contract awarded to WEIR PUMPS, Glasgow, by Shell Exploration and Production, operators for the Shell/Esso joint venture development. The contract is for three sea-water injection pumps driven by 4,280 kW motors with gearboxes, integral lubricating oil system, and instrumentation and health monitoring equipment, and for three booster pumps with 290 kW motors. Each unit of main and booster pump delivers 300 cu metres of water an hour at 240 bar.

★

Commons: Channel Tunnel BURG, West German manufacturer of automatic palletising systems, has been awarded a £3m contract by Shell UK. The contract is for a custom designed turnkey barrel and container filling and palletising plant at the new Shell Lubricants Centre, Sanlow, and was awarded through managing contractor MW Kellogg.

★

M. L. ENGINEERING (PLYMOUTH) has been awarded a £5.5m contract by British Rail for signalling equipment in the Waterloo area. The project encompasses the modernisation of signalling equipment on the south-western sector of southern region from Waterloo to Surbiton on the main Bournemouth and Salisbury lines, Waterloo to Barnes on the Reading and Windsor lines and from Waterloo to Dorking. The new system will be controlled from a signalling centre at Wimbledon.

★

TOUCHE ROSS has been awarded a project management contract for the NCB's £400m Asfordby Coal Mine. The assignment is to assist the NCB with the development, implementation and operation of sophisticated project management systems. It will continue for more than three years. The Asfordby contract is one of the biggest-ever assignments won by the management consulting arm of Touche Ross & Co in the UK, and is worth over £2m. The consultants will provide training to ensure that the development at Asfordby can be adapted for use at other NCB sites.

★

A further order for the Pentara telephone system worth a forecast £21m has been awarded to TMC (a Philips company) by British Telecom. The Pentara was launched by BT just over a year ago and orders totalling £18m were placed with TMC for the system during the past year. It is a "hybrid" system offering Keysystem working, manager/secretary working, selective call distribution and PABX operation, or a mix of these configurations. Modular design provides for a variety of exchange lines/extensions up to a maximum of 116 ports. It is this flexibility of application which has helped Pentara in establishing market leadership in the UK, and the recent order will extend the user-base still further, the company says.

★

STROMBERG has received orders from the Ministry of Electricity and Water, Oman, worth over £5m covering electrical equipment for substations and sewage plant. The largest is for two 132/33 kV and two 33/11 kV substations at Mabella and Musannah. Other 132 kV substations at Sohar, Ibri and Dank are to be provided with switchgear, transformers, protective and control equipment. Three 1800 kVA 11 kV/415 V transformers with switchgear, motor control centres and control panels are to be installed at the Great Mutrah sewage treatment plant.

★

OAKWOOD GROUP, via its civil and electrical engineering subsidiary Clough Smith, has been awarded a £1.5m plus contract by British Rail for cable laying and associated works in connection with the Waterloo re-signalling scheme.

UK COMPANY NEWS

Bredero Props. shares to be offered at 145p

BY ALICE RAWSTHORN

THE PROPERTY developer, Bredero Properties, which has hitherto traded as the UK subsidiary of the Dutch multinational, VBB, is joining the stock market through an offer for sale which will capitalise the company at £29.5m.

After the flotation VBB will hold 49.5 per cent of Bredero. The offer will release 10.26m shares, including 4.14m new shares, at 145p each.

Bredero first surfaced in this country in 1974 in the wake of the property crisis of the early 1970s. Initially its activities centred on the residential sector, but the company has since diversified into retail and commercial development, which now produce the bulk of profits.

The largest development, the Ashley Centre in Epsom, has just been completed. With that the company diversified into property rental for the first time by retaining a holding in the development.

In 1985, Bredero produced profits of £2m. Since 1981, the company's net asset base has grown from £1.79m to £18.22m, fuelled by expansion in the retail and commercial sectors.

Although VBB will absorb most of the proceeds of the offer, some £5.1m will be ploughed back into Bredero.

The offer is sponsored by the merchant bank, Morgan Grenfell, and the stockbroker, Rowe and Pitman. Dealings commence Thursday.

● comment

The last property company to float, Arlington Securities, sailed onto the market last month and now trades at a plump premium. There is little reason to suspect why Bredero should not fare just as well. The company has increased trading profits year after year ever since it first surfaced in the UK, borrowings are unusually low for the sector and there are a string of impressive future developments to dangle in front of investors. And Bredero's results have only just begun to show the benefits of the growth of commercial developments in the 1980s and its recent entrée in the rental field. Quixotic though the market may be at the moment the City, soothed by a series of buoyant results from property companies, is amenable to the sector. With projected profits of £2.8m and an offer price of 145p, Bredero will float on a prospective p/e of 11.9 and most analysts would have been benign about one or two points higher.

COMPANY NEWS IN BRIEF

LONRHO, the industrial agricultural and trading company headed by Mr "Tiny" Rowland, is to seek a judicial inquiry in the Scottish courts into last year's acquisition of the House of Fraser stores group by the Al-Fayed brothers. Lonrho plans to complain about the Department of Trade which, the company claims, "failed to inquire into the true circumstances surrounding the offer by the Al-Fayeds." Mr Rowland has queried the source of the Al-Fayed's funds after the success of their £585m bid for House of Fraser in March 1985. Lonrho had itself pursued Fraser for seven years.

STANDARD CHARTERED Bank has urged Lloyds Bank shareholders to vote against the proposed £1.2bn takeover of Standard at the meeting on June 6. Lord Barber, Standard's chairman, says this contested bid "will prove disruptive and counter-productive for Lloyds."

GLEN ABBEY, Irish hosiery manufacturer, incurred a loss of I£479,000 (£426,000 sterling) in 1985, compared with I£146,000 last time. Discontinued operations accounted for I£487,000 and directors are now confident of the future. Assuming shareholders approve the sale of Belgard division, group will be virtually debt free.

FULCRUM Investment Trust reports gross revenue £172,000 for six months ended April 30, 1986 (£131,000) and net income £82,000 (£59,000). Earnings 2.57p (2.48p) per share and interim dividend 2.2p (same). Net asset value per income share 43.8p (41.31p at end October 1985) and 11.79p (7.49p) per capital share.

BIRMINGHAM & DISTRICT Investment Trust, a subsidiary of BET, raised net asset value from 51.87p to 53.8p per 10p ordinary in year to March 31 1986. Net profits totalled £5.96m (£7.21m) after tax of £3.6m (£2.25m). Earnings amounted to 3.49p (4.23p). Final 2.63p makes net total dividend of 3.48p (4p).

TR INDUSTRIAL and General Trust is raising its dividend to 4p (3.5p) for the year ended March 31 1986 with a final of 2.6p. Earnings were 4.63p (3.8p) per share. At year-end net asset value stood at 258.5p (202p) after prior charges at par. Total income was £19.38m (£15.82m) and net income £10.02m (£8.23m).

SCOTTISH INVESTMENT Trust returned earnings of 2.91p (2.42p) for half-year ended April 30 1986 and is paying an interim dividend of 2.3p (2p) net per share. Income was £5.86m (£4.88m) and net revenue £2.53m (£2.11m). At April 30 net asset value stood at 441.9p (349p at October 31 1985).

RELIANT MOTOR has reduced pre-tax losses from £598,000 to £195,000 for the half year ended March 31, 1986 on turnover up at £7.75m (£6.27m). Losses per share fell to 3.5p (10.8p).

MARINE ADVENTURE Sailing Trust had a net asset value of 259.7p per £1 share at March 31 1986 against 207.3p six months earlier. At April 19 1986 it was 259.2p. Net revenue for the six months amounted to £16,631 (£78,754) after tax of £6,714 (£3,451).

APPOINTMENTS

New chairman for Laporte Industries

Mr Roger Bexon, who is to retire as deputy chairman of The British Petroleum Company on June 30, will succeed Mr Richard Ringwald, as chairman of LAPORTE INDUSTRIES (HOLDINGS) from July 17. Mr Bexon, who joined the Laporte board as a non-executive director last January, has been deputy chairman of BP since 1983. He has also been chairman of BP Exploration and BP Gas and a director of Standard Oil and BP Canada Inc. He is a non-executive director of BICC.

★

Key senior appointments have been made in the international capital markets division of BARCLAYS DE ZOET WEDD. Mr Graham Pooley is to become head of an integrated new issue and swaps activity, Mr Andrew Pye has been appointed head of syndicate and Ms Clare Grenfell to the syndicate department. Mr Pye and Ms Grenfell join from Mitsubishi Finance where he was a director; he was previously with Merrill Lynch Capital Markets. Mr Pooley joins from Bank of America International where he was an executive director.

★

MWP, a company jointly owned by Morgan Grenfell and Company, Willis Faber and PA Consulting Services, has made the following changes. Mr N. B. M. Kittoe and Mr A. S. Minns have taken substantial equity holdings and been appointed managing director and finance director respectively. Mr P. F. Norris has joined as an assistant director. Morgan Grenfell, Willis Faber and PA are retaining their interests in the business.

★

Mr C. J. Hayes, operations director, and Mr M. J. Mills, sales and marketing director, have been appointed to the board of BRITISH TISSUES. Mr J. Simelius succeeds Mr M. Nuutila on his retirement. Mr K. W. Bradshaw also retires. The company is jointly owned by Smith and Nephew Associated Companies and The Nokia Corporation of Finland.

★

RENOLD has appointed Mr Bruce Dagley to the new post of international manufacturing director—chain products. He was manufacturing manager at GEC Machines, Bradford.

★

THE MANCHESTER SHIP CANAL COMPANY has appointed Mr R. A. H. Collinge as deputy managing director, and Mr P. I. W. Mayne as company secretary.

★

BRITISH RAILWAYS BOARD has appointed Mr Philip Wood as director policy unit on secondment for two years from the Department of Transport. He succeeds Dr John Prideaux, who was appointed director InterCity early this year. Mr Wood is an assistant secretary in the railways directorate of the Department.

★

Mr Keiichi Yoshida, formerly area manager and chief manager of MIDLAND BANK'S Tokyo branch, has been appointed a corporate finance director at Midland Bank in London, where he will become head of an expanded Japan desk. He will be responsible for managing business relationships with Japanese corporations on a global basis, with particular emphasis on the UK and Europe. Mr Ray Sondah, formerly chief manager and area treasurer at Midland's Hong Kong branch, has been appointed area manager and country manager for Japan, based in Tokyo. Mr Walter Hulatt, formerly manager, Japanese correspondent banking in London, has been appointed chief manager of Midland's Tokyo branch.

★

Mr Ronald Fidler, previously president and chief operating officer of Black and Decker, has been appointed chairman of GOR-RAY, ladies clothing manufacturer. Mr John Stillitz remains managing director. Mr Fidler is currently chairman of Oakland Management Holdings, and of Alpha B.E.F. Management investment board for Alpha Business Expansion Fund.

★

Mr R. L. Acutt has been appointed financial director and company secretary of UMECO HOLDINGS in sucession to Mr R. D. Oates.

★

THE EQUITABLE LIFE ASSURANCE SOCIETY has elected Professor Roland Smith to be president. The vice presidents are Mr A. G. Tritton and Mr T. G. Abell. Mr D. L. Murison, the former president, and Sir Ashley Ponsonby, a former vice president, have retired.

★

RANSOMES SIMS AND JEFFERIES has appointed Mr K. J. S. Wyatt, sales and marketing director designate, to the main board.

★

HODGSON, McCREERY AND CO and Minahan Reinsurance Management have appointed Mr Adrian Howells to their boards.

★

CEMENTATION INTERNATIONAL, a Trafalgar House Group company, has appointed Mr Michael Slater as assistant managing director. He has been a main board director of Cementation International since 1981. From 1982, he has been project director of the company's largest contract to date, the £308m Sultan Qaboos University and Hospital project, Oman. Mid-1986 will see the completion of the university complex, housing halls of residence with the University Hospital scheduled for completion in 1988. Apart from retaining full responsibility for this contract, Mr Slater will now concentrate on Cementation's new activities in the US and on potential projects elsewhere.

★

Mr Michael J. Cross has been appointed a non-executive director of *CLARKE SECURITIES*, the holding company of the Staffordshire-based private housing, construction and plant hire group, one of the largest privately owned construction and housing groups in the country.

★

GOOD RELATIONS GROUP, the public relations consultancy, has appointed Mr Mark Smith to the board as group finance director. Mr Smith joined Good Relations in July 1984 as group financial controller. He succeeds Mr Alan Cornish as group finance director.

★

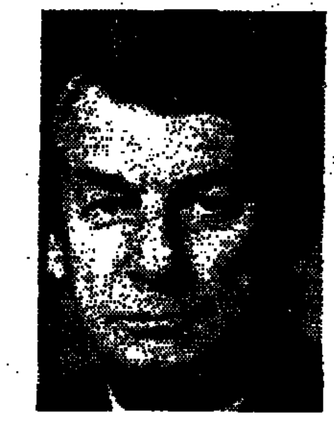
Mr Sid King has been appointed a director of CANNON ASSURANCE, part of the Cannon Lincoln Group. Mr King joined Cannon in April last year and has responsibility for the company's direct sales force.

★

ANDERSON STRATHCLYDE, the Scottish based mining machinery manufacturer, has announced several appointments within its coal face equipment division. Mr Ken Underhill, divisional export director for the past three years, moves up to the post of marketing director in which he will be responsible for co-ordinating the division's UK sales, export sales and mining and technical operations. Mr Eric Chivers, marketing director UK since 1984, is now divisional mining director; Mr Alastair Bowman, formerly director of sales UK, is now UK sales director; Mr Mike Strickland, export general manager, becomes export director; and Mr David Millar, commercial general manager, is now commercial director.

★

Mr H. D. (Harry) Cone has been appointed company secretary of NORTHERN ENGINEERING INDUSTRIES, the major electrical, mechanical, structural and combustion engineering group with its headquarters in Newcastle upon Tyne. He succeeds Mr R. S. Lock who has retired. Mr Cone is a Fellow of the Institute of Chartered Secretaries and Administrators. He joined NEI as assistant company secretary in 1984, and was appointed deputy company secretary in 1985.



Mr Roger Bexon who becomes chairman of Laporte Industries in July.

BUSINESSMAN'S DIARY

UK TRADE FAIRS AND EXHIBITIONS

Current
Fine Art and Antiques Fair (01-385 1200) (until June 7) — Olympia

June 3-5
Northern Electronics Exhibition —ELECTRONORTH (0892 36685) — G-Mex Centre, Manchester

June 3-6
International Chemical and Process Engineering Show and Conference — EUROCHEM (01-891 5051) — NEC, Birmingham

June 7-8
International Air Fair and Trade Exhibition (0959 71111) — Biggin Hill

June 8-12
Shop *Equipment* and *Display* Exhibition, including Point of Sale—SHOPEX INT (01-868 4499) — Olympia

June 11-21
Grosvenor House Antiques Fair (0799 26699) — Grosvenor House, W1

June 23-26
Institute of Leisure and Amenity Management Conference and Exhibition (0491 873558) — Harrogate

June 24-26
Advanced Materials Conference and Exhibition (01-868 4466) — Wembley Conference Centre

June 25-27
Property and Construction Management Exhibition (01-995 8003) — Barbican Centre

July 1-5
International Production Engineering and Productivity Exhibition and Conference—PEP (01-891 5051) — Olympia

July 8-10
International Satellite and Cable TV Exhibition and Conference—CABLE (01-868 4466) — Met. Exhn. Hall, Brighton

Education, Training and Personnel Development Exhibition and Conference (01-637 2400) — NEC Birmingham

July 14-17
International Water Exhibition and Conference — WORLD WATER (0923 778311) — Olympia

OVERSEAS TRADE FAIRS

Current
Mechanical Handling Machine Tool & Products Exhibition (01-439 3964) (until June 4) — Paris

June 3-6
Retail and Distributive Exhibition — RETAIL EUROPE (0734 794161) — Amsterdam

June 10-13
International Banking and Finance Services and Technologies Exhibition — TECHNOBANK (0494 775444) — Geneva

June 11-15
International Wine Festival— VINOVA (01-977 4551) — Vienna

June 10-16
International Rubber and Plastics Exhibition (01-486 1951) — Beijing

June 24-28
Radio and TV Trade Fair (01-734 0543) — Frankfurt

July 7-11
International Powder Metallurgy Exhibition and Conference (01-493 3893) — Dusseldorf

August 31-September 6
International Autumn Fair (01-240 7013) — Leipzig

September 17-24
International Engineering Fair (021-455 9600) — Brno

BUSINESS AND MANAGEMENT CONFERENCES

June 2-3
Avmark International's annual conference on European aviation, European liberalisation and its effect on aircraft demand and values (01-821 6788) — Tara Hotel, W8

June 3
Professor R. B. Cattell, Independent Assessment and Research Centre — assessing personality (01-486 6106) — Royal Hotel, WC2

June 9-10
FT Conferences: World Electronics — Strategies for tomorrow's markets (01-621 1355) — Hotel Inter-Continental, W1

June 12
The Institute of Petroleum: Sources of information for the offshore industry (01-636 1004) — New Cavendish Street, W1

June 16
LSE: Energy supply options in a resource-full national economy —the case of the UK (01-405 7686) — London, WC2

June 18-19
FT Conference: World gold in 1986 (01-621 1355) — Hotel Inter-Continental, W1

June 18
Institute of Directors: UK companies — the revenue offensive (01-839 1233) — 116 Pall Mall, SW1

June 18
RIPA: Government and the private sector (01-222 2248) — London Business School, NW1

June 18-20
1986 World Congress on Management Development (0234 48338) — Royal Lancaster Hotel, W2

June 25
Dun & Bradstreet: How to handle letters of credit (01-377 4453) — Holiday Inn, London

July 2
The Industrial Society: We're making it happen — industry works for people (01-839 4300) — The Royal Albert Hall

July 2-3
International Business Communications: Tax aspects of international treasury management (01-236 4080) — *Cafe Royal, W1*

July 7-9
The Institute of Petroleum: Introduction to petroleum economics (01-636 1004) — 61 New Cavendish Street W1

July 8-9
Crown Eagle: Defence contract management and negotiation (01-242 4111) — The Tower Hotel, E1

July 9-11
HS Conferences: Three days of theft, fraud and negligence (01-935 2382) — Cafe Royal, W1

July 10
The Royal Institute of International Affairs: China's seventh Five Year Plan: an assessment (01-930 2233) — Chatham House, SW1

August 26-28
FT Conference: World aerospace to the end of the century (01-621 1355) — Hotel Inter-Continental, W1

Anyone wishing to attend any of the above events is advised to telephone the organisers to ensure that there has been no change in the details published.

This week in parliament

TODAY

Lords: Ipswich Port Authority Bill (second reading). Education Bill (third reading). Protection of Children (Tobacco) Bill (second reading).

TOMORROW

Commons: Opposition debate on Government economic policies and unemployment. Channel Tunnel Bill (Procedure). Opposed private business, including British Rail Stansted Bill (second reading).

Lords: Corneal Tissue Bill (committee). Insolvency Bill (second reading). Company Directors' Disqualification Bill (second reading). Gas Bill (committee). Protection of Military Remains Bill (committee). Forestry Bill (second reading).

Select Committees: Education Science and Arts on Prison Education (Room 15, 11 am). Witnesses: Prison Officers' Association; Prison Governors' Branch of the Society of Civil and Public Servants. Parliamentary Commissioner for Administration on his reports. (Room 8, 4.30 pm). Witness: Sir Lawrence Airey KCB, chairman of the Board of Inland Revenue.

WEDNESDAY

Commons: Building Societies Bill (remaining stages). Debate on Education—Assisted Places (amendment) Rules.

Lords: Debate on Criminal Legal Aid. Civil Protection in Peacetime Bill (second reading). Children and Young Persons (Amendment) Bill (second reading). Safety at Sea Bill (second reading).

Select Committees: Trade and Industry on monitoring of British Leyland (Room 15, 10.45 am). Witness: Peter Morrison MP, Minister of State for Industry. Employment on discrimination in employment (Room 8, 4.15 pm). Witness: Miss A Mueller CB, Permanent Secretary, Management and Personnel Office. Transport on Financing of Rail Services (Room 17, 4.15 pm). Witnesses: NUR and Aslef. Energy committee on thec oal industry (Room 8, 10.30 am). Witnesses: Town and Country Planning Association; National Council for Protection of Rural England; National Association of Opencast Operators. Social Services on public expenditure for the services (Room 20, 4.15 pm). Witnesses: DHSS officials. Home Affairs on rules for redistribution of seats (Room 18, 4.15 pm). Witness: Mr Merlyn Rees MP. Foreign Affairs on FCO/ODA supply estimates for 1986-87 (Room 16, 10.30 am). Witness: British Council.

THURSDAY

Commons: Channel Tunnel Bill (second reading). Motion for committee to a Select Committee.

Lords: Drainage Rates (Disabled Persons) Bill (third reading). Education Assisted Places (amendment) Regulations. Health Service Joint Consultative Committees (access to information) Bill (second reading). Gas Bill (committee).

Select Committees: Agriculture on effects of pesticides on human health (Room 16, 10.45 am). Witnesses: Agriculture and Food Research *Council; National Vegetable* Research Station.

FINANCIAL DIARY FOR THE WEEK

The following is a record of the principal business and financial engagements during the week. The board meetings are indications are not always available whether dividends concerned are interims or finals. The sub-divisions shown below are based mainly on last year's timetable.

TODAY

COMPANY MEETINGS—
Black (A.C.), 35, Bedford Row, WC. 12.00
Booker McConnell, Great Eastern Hotel, Liverpool Street, EC. 12.00
Campari Inds., Campari House, Priestley Way, Staples Corner, NW. 12.00
Evered, Connaught Rooms, Great Queen Street, WC. 10.30
Executex Clothes, 399, York Road, Leeds. 11.30
Falcon Inds, Butchers' Hall, Bartholomew Close, EC. 11.00
Fisher (Jm ss), Lisdoonie Hotel, Abbey Road, Barrow-in-Furness. 12.00
Laird Group, Brown's Hotel, Dover Street, W. 12.00
Lamont Hodgs, Caledonian Hotel, Princes Street, Edinburgh. 12.00
Perry Group, Savoy Hotel, WC. 12.00
Petranol, 7-11, Moorgate, EC. 11.30
Senior Engineering, Connaught Rooms, Great Queen Street, WC. 12.30
Norfolk Capital, Norfolk Hotel, Harrington Road, SW. 10.30

BOARD MEETINGS—
Finals:
Airflow Streamlines
Anglo Amer Corp of South Africa
Hanover Investment
Nimslo Intl.
Powell Duffryn
Sims Catering Butchers
TR Natural Resources Inv Tst
Interims:
Hunterprint
Moran Tea

DIVIDEND & INTEREST PAYMENTS—
Ahmanson (H.F.) 34.5cts
Amdahl Corp 5cts
American Brands 5cts
Aremson 0.4p
Ashdown Inv 3½pcPf 1.225p
Atlantic Computers 1.75p
BAT Inds 12¼pcLn 2003-08 6¼pc. Flg Rate Cap Nts 1986-90 5.8589pc
Beckman (A.) 1.96p
CCA Galleries 1p
Delta 4.15p
Fnderch 40cts
Erith 2.2p
Ford Motor 82.5cts. Bdr (1/20th Sh. Nat West Bank) 4.125cts
French Connection 3.5p
Guest, Keen & Nettlefolds 7.5p
Halstead (James) 2p
Ingersoll-Rand 65cts
Legal & General 16p
Lilleshall 1.5p
Lowe Howard-Spink & Bell 4p
Lyles (S.) 2.75p
Marshall (Thomas) (Loxley) 2.2p. A Non-Vtg 2.2p
Mexico Fund 5cts
Ocean Transport Trading 3.95p
Petrocon 4p
Phicom 0.75p
Savoy Hotel A 3.5p, B 1.75p
Share Drug Stores 0.9p
TR Trustees 4½pcPf 1.575p
Texas Eastern Finance 15¼pcGtdNts 1989 7⅝pc
Ultramar 6.5p

TOMORROW

COMPANY MEETINGS—
BETEC, Mandeville Road, Aylesbury, Bucks. 12.00
Bank of Scotland, Mound, Edinburgh. 12.15
Beattie (James), 71-78, Victoria Street, Wolverhampton. 2.30
Blue Circle Inds, Inn on the Park, Hamilton Place, Park Lane, W. 12.00
Bowthorpe, Gatwick Road, Crawley, West Sussex. 3.00
Friendly Hotels, Norfolk Hotel, Hagley Road, Edgbaston, Birmingham. 3.00
Hunter, 32, Hampstead High Street, NW. 11.00
Office & Electronic Machines, 140-154, Borough High Street, SE. 12.00
Quick (H. & J.), 860, Chester Road, Old Trafford, Manchester. 11.00
Turriff, Budbrooke Road, Warwick. 11.00
Wolstenholme Rink, Last Drop Hotel, Bromley Cross, Bolton. 12.00

BOARD MEETINGS—
Finals:
Chapman Inds.
De La Rue
IBL
Investment Co.
Leigh Interests
Norcros
Plysu
Prontaprint
[illegible]eraton Securities
Sketchley
Sterling Publishing
Interims:
Archimedes Inv Tst
Hanson Trust
McCorquodale
Sturge

DIVIDEND & INTEREST PAYMENTS—
Astra AB SKr 4
British Aerospace 10p
British Empire Sec & Gen Tst 0.2p
Electrolux B Non-Restricted SKr 7.5
Esselte Aktiebolag A SKr 13.5, B SKr 13.5
General American Trans Intnl Fin 8¼pc Gtd Skg Fd Bds 1987 6⅛pc
Greenbank 1.5p
Senior Engineering 0.875p
Volvo A (Non-Restricted) SKr 8.5, B (Non-Restricted) SKr 8.5

WEDNESDAY JUNE 4

COMPANY MEETINGS—
Bentalls, Wood Street, Kingston-upon-Thames. 12.00
Berkeley & Hay Hill, Montague Close, London Bridge, SE. 12.00
Davies & Newman, Room 100, Great Eastern Hotel, Liverpool Street, EC. 12.00
Empire Stores (Bradford), Norfolk Gardens Hotel, Bradford. 12.00
Etam, Barber Surgeons' Hall, Monkwell Square, Wood Street, EC. 12.00
Glynwed Intl, Headland House, New Coventry Road, Sheldon, Birmingham. 12.00
Helical Bar, Institute of Chartered Accountants, Moorgate Place, EC. 10.30
Kwik-Fit (Tyres & Exhausts), Abercorn Rooms, Great Eastern Hotel, Liverpool Street, EC. 12.00
Pearl Assurance, High Holborn, WC. 12.00
Snowdon & Bridge, Wendover Hotel, 118, Monton Road, Eccles, Manchester. 12.00

BOARD MEETINGS
Finals:
Century Oils
Johnson & Firth Brown
Reed Intl.
TR North American Inv Tst
Interims:
Valin Pollen Intl.

DIVIDEND & INTEREST PAYMENTS—
Adwest 1.7p
BFG Finance Fltg Rate Nts 1996 $204.44
BSR Intl 1.85p
Bentalls 1.9p
Export-Import Bk of Korea Fltg Rate Nts 1995 $426.56
Hoechst DM 10. Cdbr (Iss Warburg & Co) DM 1
Laidlaw Grp 1.7p
North Atlantic Secs 1p
Quick (H. & J.) 2.25p
Standard Chartered Und Prim Cap $421.51
Turriff 7p
Wolstenholme Rink 5.25p

THURSDAY JUNE 5

COMPANY MEETINGS—
Aquascutum, 100, Regent Street, W. 12.00
Berkeley Exploration & Prod., Stationers' Hall, Ave Marie Lane, EC. 11.30
Billam (J.), Balwins Omega, Sheffield. 12.00
Clarke, Nickolls & Coombs, Howard Hotel, Temple Place, WC. 12.00
EIS, Brewer's Hall, Aldermanbury Square, EC. 12.00
Folkes, Plough & Harrow Hotel, 16, Hagley Road, Edgbaston, Birmingham. 12.00
Frost Group, Grant Thornton, Ringwood House, Walton Street, Aylesbury. 12.00
Hopkinsons, Birkby Grange, Birkby Hall Road, Birkby, Huddersfield. 1.30
Laing (John), Dacorum District Council Pavilion, Marlowes, Hemel Hempstead, Hertfordshire. 2.30
Lilley (F.J.C.), Albany Hotel, Glasgow. 12.00
Marlborough Property, Howard Hotel, Temple Place, WC. 11.30
Martin (Albert), Swallow Hotel, South Normanton, Derbyshire. 11.30
Martin Currie Pacific Trust, 29, Charlotte Square, Edinburgh. 12.30
More O'Ferrall, 35, Charles Street, W. 10.30
Neill (James), Handsworth Road, Sheffield. 12.00
Nu-Swift Inds, Grosvenor House, Park Lane, W. 11.30
Richards (Leicester), Phoenix Iron Works, Martin Street, Leicester. 12.00
Spear (J. W.), Richard House, Enstone Road, Green Street, Enfield, Middlesex. 12.00
Telephone Rentals, TR House, Bletchley, Milton Keynes, Bucks. 12.30

BOARD MEETINGS—
Finals:
Bultfontein Gold Mining
Capital Gearing Trust
Henderson Admin.
Hill Samuel
Holden Hydroman
LCP
Northern Securities Trust
Oldacre
Piccadilly Radio
Rolfe & Nolan Computer Services
Stewart Enterprise Inv
Storehouse
Strata Invs.
Interims:
Beatrix Mines
Grootvlei Proprietary Mines
Heavitree Brewery
Marievale Cons. Mines
[illegible]

DIVIDEND & INTEREST PAYMENTS—
[illegible]
Gillette 34cts
Hongkong & Shanghai Banking Prim Cap Und FRN Sec Ser $103.02
Korea Dev Bkg Fltg Rate Nts 1989 $43.29
Prudential Corp Fltg Rate Nts 1995 £311.29
Rexnord 11cts
Reynolds (R.J.) Inds 37cts
United Ceramic 2.75p
Vanbrugh Currency Ptpg A RedPf 4.7p. Ptpg B RedPf 470p
Whatman Reeve Angel 1.63p

FRIDAY JUNE 6

COMPANY MEETINGS—
Cory (Horace), 17, Southampton Place, WC. 12.00
Dewhirst (I.J.), Royal York Hotel, York. 12.00
Home Counties Newspapers, Strand Palace Hotel, Strand, WC. 3.00
House of Lerose, Metropole Hotel, NEC, Birmingham. 12.00
Liberty, 214-222, Regent Street, W. 12.00
Macdonald Martin Distilleries, Macdonald House, Leith, Edinburgh. 12.00
RMC, Inn on the Park, Hamilton Place, Park Lane, W. 11.30
Rugby Portland Cement, Crown House, Rugby. 12.30
Scottish Television, Cowcaddens, Glasgow. 12.00
United Friendly Insurance, 42, Southwark Bridge Road, SE. 12.30
Wace, 60-66, Saffron Hill, EC. 10.00

BOARD MEETINGS—
Final:
GT Global Recovery Inv Tst

DIVIDEND & INTEREST PAYMENTS—
ATA Selection 0.9p
Alcan Aluminium 20cts
Anchor Chemical 3p
Aquascutum 1.7p. A 1.7p. 7½pcCumPf 1.75p
Automotive Products 10.4pcDb 1996-2001 5.2pc
Avon Rubber 7½pc1stMtgDb 1986-90 3¾pc
Cadbury Schweppes 9pc1stMtgDb 1988-1993 4½pc
Caparo Inds 0.9p
Chemical Methods 1ct
Ford Intl Capital 7¼pcCnvGtdLn 1980-88 3⅝pc
Freemans 4.7p
Glynwed Intl 7¼pcDb 1989-94 3⅝pc
Govett Strategic Inv Tst 1.3p
Greenall Whitley 4½pcDb 1987-92 2¼pc. 7¼pcDb 1987-92 3⅝pc
Henara 2.13p
Highland Distilleries 0.616p
Homestake Mining 5cts
Ladbroke 8pcGtdUnsLn 1990-92 4pc
Lilley (F.J.C.) 2.56p
Lloyds Eurofinance Gtd Fltg Rate Nts 1992 $214.86
London & Scottish Marine Oil 7.7p
Marlborough Property 0.375p
Metal Closures 7¼pcDb 1986-91 3⅝pc
Misr Finance (Cayman) Gtd Fltg Rate Ser Nts 1989 $445.52
Newhome-Veritas 9½pcDb 1993-98 4¾pc
Nu-Swift Inds 2.25p
SGB 9¼pcDb 1991-96 4⅝pc
Scott & Robertson 1.8p
Tove & Co 3.75p
UDO 1.5p
Utd Friendly Insurance B 12.1p
Wade Potteries 1.1p

SATURDAY JUNE 7

DIVIDEND & INTEREST PAYMENTS—
Racal-Chubb 8½pcLn 1987-92 4¼pc. 8pc Ln 1992-95 4pc
Town & City Properties 7½pc1stMtgDb 1997-2002 3¾pc

SUNDAY JUNE 8

DIVIDEND & INTEREST PAYMENTS—
Reed Intl 5pcPf 1.75p. 7pcPf 2.45p. 5½pc Ln 2¾pc. 7½pcLn 3¾pc

INTL. APPOINTMENTS

Gulf Canada puts a stamp on Hiram Walker board

BY BERNARD SIMON IN TORONTO

GULF CANADA has moved quickly to put its stamp on Hiram Walker Resources, the energy and drinks group which it acquired six weeks ago after one of Canada's fiercest and most expensive takeover battles.

Gulf, 80 per cent-owned by Olympia and York, the real estate group, has appointed 10 new Hiram directors to replace 14 members of the board who helped the company resist Gulf's and O and Y's initial advances. A senior O and Y executive, Mr Marshall (Mickey) Cohen, 51, has been named president of Hiram Walker. O and Y's executive vice-president, Mr Gilbert Newman, 64, will assume the same post at Hiram.

Only four of Hiram's previous directors remain on the board—Mr Alfred Downing, the chairman, who also continues as chief executive, and the heads of the three main operating divisions: oil and gas; spirits; and an Ontario gas utility. Mr Downing has stepped down as president.

The change of control at Hiram was evident recently when the new board decided to reverse an earlier decision to sell the liquor division to Allied-Lyons, the British food and beverage group, as part of its defence against Gulf's initial takeover bid. Hiram has launched a legal challenge against the C$2.6bn sale, which Allied-Lyons maintains is still valid.

Mr Cohen was until last year deputy minister, the most senior Civil Service rank, in the Federal Department of Finance in Ottawa. A tax lawyer by profession, his responsibilities at O and Y have centred on the development of its non-property interests, which include Gulf and Abitibi-Price, the newsprint maker.

Mr Newman is O and Y's chief financial strategist and a long-time confidant of the Reichmann family, the company's controlling shareholders.

Mr Paul Reichmann said at a rarely given press conference last week that Mr Downing had decided to step down as Hiram president to allow someone else to deal with issues "too difficult" for anyone directly involved in the original decision to sell the liquor business. Mr Reichmann said other senior Hiram employees may also decide "to shift their positions with the company because the present owners take a different view" of the deal with Allied-Lyons.

Mr Paul Reichmann: difficult issues over proposed sale of Hiram liquor business

Besides the pending court action, O and Y and Gulf have launched several other initiatives to strengthen their position. Mr Reichmann's press conference took place during a visit to Hiram's main distillery in Windsor, Ontario, where he attempted to soothe trade union fears that Gulf will dispose of some operations even if it succeeds in retaining the liquor business as a whole.

Brown Boveri elects a new chief

By John Wicks in Zurich

BROWN BOVERI, the Swiss-based engineering group, has chosen Dr Thomas P. Gasser to take over as its new chief executive in June of next year.

This will end the interim reign of Dr Fritz Leutwiler, the board chairman, in the additional post of chairman of the corporate management board (chief executive). Dr Leutwiler—the former president of the Swiss National Bank (the country's central bank) and of the Bank for International Settlements—took over the chief executive role this year, following the sudden resignation in February of Mr Piero Hummel.

Mr Hummel's unexpected move was believed to have been prompted by differences on corporate policy with Dr Leutwiler, who succeeded Mr Franz Luterbacher as board chairman in July last year.

Dr Gasser, who is 53, has since 1982 been a general manager at Brown Boveri's group headquarters in Baden with responsibility for finance and marketing.

Previously, he had been in a similar position with the Alusuisse group's parent company, Swiss Aluminium in Zurich.

At the the 1987 shareholders' meeting Dr Bernd H. Mueller-Berghoff, 56, will be nominated for appointment to the parent company's board, where he is intended to serve as vice-chairman.

Irving Trust top recruit

BY PAUL TAYLOR IN NEW YORK

MR DAVID TAYLOR, who was briefly chairman of Continental Illinois at the height of the Chicago banking group's funding crisis in mid-1984, has been elected vice-chairman and a director of Irving Trust, the New York-based banking group. His appointment was announced by Mr Joseph Rice, chairman and chief executive of Irving Trust, the 20th largest US banking group.

Mr Taylor sprang to international prominence in February 1984 when he took over as chairman of the then beleagured Chicago banking group following the resignation of the former chairman, Mr Roger Anderson.

He helped lead the Chicago group through its severe liquidity crisis and negotiate the $4.5bn federally sponsored bail-out of Continental Illinois in July, 1984, following which he stepped down as chairman to make way for a new management team appointed by Federal Bank regulators led by Mr John Swearington and Mr William Ogden.

Since then he has served as vice-chairman of Continental Illinois National Bank and Trust Company, the holding company's main banking subsidiary, responsible for the bank's funding, trading and Treasury operations.

Mr Taylor, aged 56, will have similar responsibilities at Irving Trust where he will be responsible for the group's securities markets, investment banking, foreign exchange and funding activities — assuming the duties of Mr Robert Stone, senior executive vice-president who is due to retire next year.

Nippon Kokan steps up in US

BY OUR NEW YORK STAFF

NATIONAL STEEL, the US steelmaker jointly owned by National Intergroup of the US and Nippon Kokan (NKK) of Japan, has appointed Mr Kokichi Hagiwara, senior managing director of the number-two Japanese steel group, to be National Steel's new president and chief operating officer.

The appointment, which is subject to shareholder approval at meetings later this month and next, appears to strengthen NKK's role in the joint venture formed almost a year ago.

Mr Hagiwara will replace Mr Robert McBride who resigned as National Steel's president and chief operating officer last month to pursue personal interests.

Mr McBride, aged 58, known for his tough and outspoken manner, said he decided to relinquish his posts because National Steel had implemented the major elements of its strategy to transform itself into a premier steelmaker.

* * *

MERRILL LYNCH and Company, the Wall Street securities house that is the biggest in the world, has promoted Mr Tetsundo Iwakuni, 49, to senior vice president of Merrill Lynch Capital Markets, its global investment banking organisation.

This represents the most senior appointment gained by a Japanese at Merrill.

With the appointment, Mr Iwakuni, who is presently chairman of Merrill Lynch Japan, will also join the concern's capital markets operating committee and international strategy committee.

Mr Iwakuni joined Nikko Securities in 1959 and worked in New York and Paris. In 1984, he joined Merrill Lynch as a director in charge of the Japanese market. He will take up his new duties in New York.

President of Texas Air stands down

By Our Financial Staff

MR GERALD L. GITNER has resigned as president of Texas Air, the US airline group which is negotiating the purchase of Eastern Airlines, the Florida-based airlines for some $600m. He is to pursue other business interests.

The resignation comes within six months of Mr Gitner, 41, taking up the post. He will, however, remain a director of the company, of its Continental Airlines subsidiary and a consultant to the group.

Mr Gitner's stepping down follows a few years after his resigning as vice president, marketing of Texas International Airlines, in 1980. Texas International later merged with Continental, under Texas Air as a holding company. No successor to Mr Gitner has been announced.

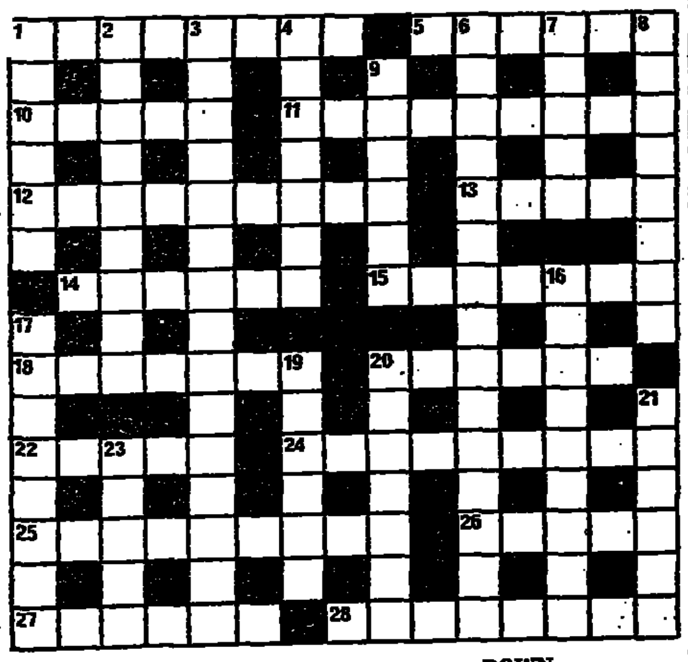
Lufthansa sales post

LUFTHANSA German Airlines has appointed Mr Rolf D. Hoehn general sales and marketing manager for North and Central America. Mr Hoehn succeeds Mr Hanns-Joachim Pastor who becomes general sales manager for central and Eastern Europe based in Frankfurt.

Mr. Hoehn, who was Lufthansa's marketing manager for North and Central America from 1972 to 1980, returns to the airline's North American executive offices in East Meadow, New York, from the Middle East.

FT CROSSWORD PUZZLE No 6,036

PROTEUS



ACROSS

1 Important person to a little group (8)
5 Take in "Sailors' World" (6)
10 Poison making eleven overweight (5)
11 Thrill for young girl may mean dismissal for some (5, 4)
12 He gets all the mail about dear seeds (9)
13 Quits flat at one point (5)
14 Under pressure to turn up and cast off (6)
15 Back-yard video horror also seen in many drawing-rooms (7)
18 Church ladies society fly to back horse (7)
20 Firm at this point has to be consistent (6)
22 The French convict returning to being within the law (5)
24 Buzzer used in Dickensian spelling-contest? (6, 3)
25 Prepare food for cost of rail-journey (5-4)
26 Clamour about one common informer (5)
27 To some extent made sister leave off (6)
28 Wise man taken in by confusion in communications (8)

DOWN

1 Provincial governor when upset by gin perhaps (6)
2 Assorted crazy characters in evidence at Christmas-time (5,4)
3 One who prevents wrinkles getting top billing in the press? (6, 9)
4 Fusilier caught in the act and rendered harmless (7)
6 No-man's-land where hidden meanings may be found (7, 3, 5)
7 Hold forth about some toilet aroma (5)
8 Sweet on boss in glass-works (5-3)
9 Well-wisher at start of week-end (6)
16 Bush-country singer at the wash-tub (9)
17 Duel-team put out at being rivalled (8)
19 Harmless Tom — or just a big act? (6)
20 Enter contest with athlete without leading marathon favourite (7)
21 Novice cut up about merry-making (6)
23 The growth of the common informer (5)

The solution to last Saturday's prize puzzle will be published with names of winners next Saturday.

FT UNIT TRUST INFORMATION SERVICE

AUTHORISED UNIT TRUSTS

[illegible]

AUTHORISED UNIT TRUSTS & INSURANCES

Sentinel Funds Manage Ltd

Standard Life Trust Mgmt. Ltd

Stewart Ivory Unit Trust Mgrs Ltd (a)

Sun Alliance Fund Management Ltd

Sun Life Trust Mgmt. Ltd

Swiss Life Pen. Tst. Man. Co Ltd (a)(c)

TSB Unit Trusts (b) (c) (y)

3i Unit Trust Managers Ltd

Target Trust Mngrs. Ltd (a)(g)

Templeton Investment Management

Thornton Unit Managers Ltd

Touche, Remnant Unit Trust Mngt. Ltd

Trades Union Unit Trust Managers

Transatlantic and Gen. Secs. (c) (y)

Triton Fd Mngrs. Ltd.

Tyndall Managers Ltd(a)(b)(c)

UK Provident Unit Trust Managers Ltd

Unit Trust Account & Mgmt. Ltd

Vanguard Trust Managers Ltd

Wardley Unit Trust Managers Ltd (a)

Waverley Asset Management Ltd (a) (c) (g)

WestAven Unit Trust Managers Ltd(a)(c)

Whittingdale Unit Trust Managers

Windsor Trust Mngrs Ltd

Wright Seligman Fund Managers Ltd

The Yorkshire General Trust

INSURANCES

AA Friendly Society

Abbey Life Assurance Co Ltd

Abbey Life—Continued

Aetna Life Insurance Co Ltd

Albany Life Assurance Co Ltd

Allied Dunbar Assurance Plc

Ambassador Life Ass. Co. Ltd.

American Life Insurance Co UK

Baltic Assurance Funds

Barclays Life Assur. Co. Ltd

Black Horse Life Ass. Co Ltd

British National Life Assurance Co Ltd

Canada Life Group

Cannon Assurance Ltd

Chase de Vere Investments Ltd

City of Edinburgh Life Assurance

City of Westminster Assurance

Clerical Medical/Fidelity International

Clerical Medical/Fidelity—Cont.

Clerical Medical Managed Funds Ltd

Colonial Mutual Group

Commercial Union Group

Continental Life Insurance PLC

Cornhill Insurance PLC

Credit & Commerce Life Ass. Ltd

Criterion Assurance Group

Crown Financial Management Ltd

Crusader Insurance Plc

Devonshire Life

Eagle Star Insurance Co Ltd

Eagle Star Insur./Midland Assur.

Equitable Life Assurance Society

Equity & Law

Family Assurance Society

Federation Mutual Insurance Ltd

First Financial Services PLC

Framlington Life Insurance Ltd

Friends' Provident Life Office

GT Management Ltd

General Accident Linked Life Assurance(a)

Assicurazioni GENERALI SpA

General Portfolio Life Ins. Plc

Growth & Sec. Life Ass. Soc. Ltd

Guardian Royal Exchange

Hearts of Oak Benefit Society

Henderson Administration (z)

Hill Samuel Life Assur. Ltd

Imperial Life Ass. Co. of Canada

Imperial Life (UK) Ltd

Irish Life Assurance Co Plc

The LAS Group

Langham Life Assur. Co Ltd

Legal & General (Unit Assur) Ltd

Legal & General Prop. Fd. Mgrs. Ltd

Liberty Life Assurance Co Ltd

Lloyds Life Assurance

London A'deen & Nthn. Mtl. Assur. Ltd

London Indemnity & Gnl. Ins. Co Ltd

London Life

London Life—Continued

London & Manchester Group

M & G Group

MGM Assurance

Manufacturers Life Insurance Co (UK)

Merchant Investors Assurance

NEL Britannia Assur. Co Ltd

N.E. Pensions Ltd

National Mutual of Australasia

National Provident Institution

Noble Lowndes & Partners Ltd

Norwich Union Asset Management Ltd

Norwich Union Insurance Soc.

Pearl Assurance (Unit Funds) Ltd

Phoenix Assurance Co Ltd

Pension Life Assurance Co Ltd

Property Equity & Life Ass. Co.

Property Growth Assur. Co Ltd

Prudential Assurance Co

Prudential Pensions Limited

Provident Life Assoc. Ltd

Provident Mutual Life Assc. Assn.

Provincial Life Assurance Co Ltd

Regency Life Assurance Co Ltd

Reliance Mutual

Royal Life Insurance Ltd

Save & Prosper Group

Schroder Life Assurance Ltd

Scottish Amicable Investments

Scottish Equitable Life Assce. Soc.

Scottish Life Investments

Scottish Mutual Assurance Society

Scottish Widows' Group

Scottish Provident Institution

INSURANCE, OVERSEAS & MONEY FUNDS

Baring Fund Managers (Guernsey) Ltd
PO Box 71, St Peter Port, Guernsey 0481 26541
Baring Currency Fund Ltd

US Dollar	$10.66	+0.02	–
Sterling	£17.05	+0.05	–
Deutschmark	DM31.14	+0.04	–
Japanese Yen	Y3,145	+5	–

Baring International Group
1901 Edinburgh Tower, Hong Kong 01-588 6133

Australia	$13.25	14.27	+0.15	0.70
Hong Kong	$13.64	14.77	+0.11	2.70
Japan Tech	$41.65	44.49		
Japan Fund	$16.79	27.20		0.20
Japan New Gen'n Fd	$9.96	10.67	+0.02	1.00
Malay Smg	$13.96	15.06		1.00
Pacific Fd	$21.435	22.950		1.5
Pacific Intl Fd	$14.14	15.37	–0.14	–
Bond Fd	$13.015	13.665	–0.029	8.78

Barrington Mgmt (CI)—Barrington Fd
Kleinwort Benson Hse, St Helier, Jersey 0534 78066

Intl Inc May 29	256.0	263.0		4.36

Bishopsgate Commodity Ser. Ltd
PO Box 42, Douglas, IoM 0624 23911

ARMAC** May 6	$95.38	101.41	–
COUNT** May 6	$5.258	5.578	–

Original issue *$10 and **£1. Next value June 2

Brazil Capital Services Ltd
48 St Vincents St, Glasgow G2 5TS 041-204 1249

The Brazil Fund	$15.39	–

Eurolife Assurance Group
5-11 Mortimer St, London W1N 7RH 01-631 0778

Sterling Eurobond Fd	110.4	
Inv Eurobond Fd	116.3	
Discretionary Fund	103.0	

S.G. Europe Obligations SA
9 Avenue de la Liberté, Luxembourg.
London Agent: FFS, Salisbury House, London Wall EC2M 5TA Tel: 01-920 0776 Telex 887281

Europe-Obligations	665.47	1.40

Eurotax Investments Ltd
1 Athol Street, Douglas, Isle of Man
UK Agents FIS St Albans 0727 41122

Eurotax In.Fd.	106.76	112.39

Fidelity International
9 Bond St, St Helier, Jersey, CI 0534 71696
Dealers: 33201, PO Box 670, Hamilton, Bermuda

American Assets (z)	$100.27	105.28	+0.42	0.41
Am Val II Com Apr 30	$66.31			–
Am Val II Prf Apr 30	$101.50			3.00
Australia (z)	$12.95	13.60	+0.10	–
$ Bond Fund (z)	$5.54	5.78	–0.05	9.80
Discovery Fund (z)	$13.57	14.29	–0.01	0.15
Dollar Savings Tst (z)	$132.80		+0.02	6.25
Far East (z)	$36.91	38.78	–0.36	0.33
Frontier (z)	$19.08	20.03	+0.17	–
International (z)	$10.65	11.19	–0.12	0.06
Orient Fund (z)	$51.23	53.89	–1.48	–
Pacific (z)	$204.60	214.83	–1.02	0.55

Hellerup Scandinavian Fund Ltd
Tyndall House, Douglas, IoM

Henderson Admin. (Guernsey)
PO Box 71, St Peter Port, Guernsey

Henderson Management SA
20 Boulevard Emmanuel Servais, Lux.

Heritable & General Fund Mngrs (Jersey) Ltd
PO Box 443, St Helier, Jersey

OFFSHORE AND OVERSEAS

Money Market Trust Funds

Money Market Bank Accounts

Western Trust & Savings Limited
The Moneycentre, Plymouth PL 1SE 0752 24141

High Int Chq Acc	10.00	7.49	10.38	Qtr

NOTES—Gross: rate to those exempt from composite rate of tax. Net: actual rate after deduction of CRT. Gr Equiv CAR: Gross equivalent to basic rate taxpayers—compounded annual rate. Int Cr: frequency interest credited.

NOTES

Prices are in pence unless otherwise indicated and those designated $ with no prefix refer to U.S. dollars. Yields % (shown in last column) allow for all buying expenses. a Offered prices include all expenses. b Today's prices. c Yield based on offer price. d Estimated. g Today's opening price. h Distribution free of UK taxes. p Periodic premium insurance plans. s Single premium insurance. x Offered price includes all expenses except agent's commission. y Offered price includes all expenses if bought through managers. z Previous day's price. § Guernsey gross. ‖ Suspended. ◆ Yield before Jersey tax. † Ex-subdivision. ‡‡ Only available to charitable bodies. ◆ Yield column shows annualised rates of NAV increase. xd ex dividend.

TRADITIONAL OPTIONS

3-month call rates

Industrials	p		
Allied-Lyons	28	Marks & Spencer	18
BAT	38	Midland Bk	44
BOC Grp	32	NEI	11
BSR	14	Nat West Bk	70
BTR	45	P & O Dfd	45
Babcock	20	Plessey	20
Barclays	45	Polly Peck	16
Beecham	32	Racal Elect	17
Blue Circle	55	RHM	20
Boots	26	Rank Org Ord	48
Bowaters	30	Reed Intnl	75
Brit Aerospace	48	Sears	12
Brit. Telecom	17	TI	42
Brown (J)	3	Tesco	30
Burton Ord	32	Thorn EMI	35
Cadburys	17	Trust Houses	12
Charter Cons	22	Turner Newall	18
Comm Union	28	*Unilever*	120
Courtaulds	26	Vickers	40
Distillers	52	Wellcome	19
FNFC	15	**Property**	
Gen Accident	75	Brit Land	16
Gen Electric	17	*Land Secs*	30
Glaxo	100	MEPC	32
Grand Met	34	Peachey	24
GUS 'A'	75	Samuel Props	18
Guardian	75	**Oils**	
GKN	32	Brit. Oil & Min	$2\frac{1}{2}$
Hanson Tst	16	Brit Petroleum	48
Hawker Sidd	52	Burmah Oil	30
ICI	58	Charterhall	3
'Imps'	28	Premier	$3\frac{1}{2}$
Jaguar	27	Shell	55
Ladbroke	32	Tricentrol	15
Legal & Gen	79	Ultramar	18
Lex Service	38	**Mines**	
Lloyds Bank	55	Cons Gold	40
Lucas Inds	60	Lonrho	25
		Rio T Zinc	50

A selection of Options traded is given on the London Stock Exchange Report Page.

LONDON SHARE SERVICE

BRITISH FUNDS

Interest Due	Stock	Price £	Last xd	Yield Int.	Yield Red.
"Shorts" (Lives up to Five Years)					
20 Jan 20 Jul	Treas 8¼pc 1984-86‡‡	99⅞	4.12	8.51	9.87
29 Apr 29 Oct	Exch. 14pc 1986	101½	24.3	13.76	9.46
21 May 21 Nov	Exch. 2½pc 1986	98½	14.4	2.54	5.74
22 Jul 22 Jan	Exch. 13¼pc 1987	102¼	16.12	12.96	9.47
10 Aug 10 Feb	Treas 10¼pc Cv '87	100	6.1	10.19	9.32
24 Aug 24 Feb	Exch 2½pc 1987	97⅛	20.1	2.57	6.39
6 Oct 6 Apr	Exch. 10½pc 1987	100	3.3	10.40	9.22
1 Nov 1 May	Funding 6½pc '85-87‡‡	98	25.3	6.61	8.36
12 Dec 12 Jun	Treas. 10pc 1987	100⅜	5.5	9.97	9.10
14 Jan 14 Jly	Treas 3pc 1987	96	9.12	3.11	6.18
3 May 3 Nov	Treas. 12pc 1987	103⅞	28.3	11.55	8.98
26 Jul 26 Jan	Treas 7¾pc 1985-88‡‡	99	20.12	7.82	8.35
10 Nov 10 May	Exch 10½pc '88	102	13.4	10.20	8.80
14 Dec 14 Jun	Treas 9½pc Cv '88	101	18.5	9.60	8.90
1 Jan 1 Jul	Transport 3pc '78-88	94	27.5	3.19	6.02
25 Apr 25 Oct	Treas. 9½pc '88	101	19.3	9.40	8.98
22 Aug 22 Feb	Treas 11½pc 1989	106	16.1	10.84	8.90
18 Oct 18 Apr	Treas 9½pc Cnv. '89	101	12.3	9.34	8.78
15 Nov 15 May	Treas 3pc 1989	91	8.4	3.27	6.04
14 Dec 14 Jun	Treas 10½pc 1989	104	28.5	10.08	8.95
1 Feb 1 Aug	Exch. 10pc 1989	102	27.12	9.72	8.93
29 Mar 29 Sep	Exch 11pc 1989	105	20.2	10.39	8.89
15 Apr 15 Oct	Treas 5pc 1986-89	93	10.3	5.36	7.26
15 May 15 Nov	Exch 10½pc Cv '89	107	18.4	9.50	7.58
15 Jul 15 Jan	Treas 13pc 1990‡‡	112	9.12	11.54	8.83
12 Aug 12 Feb	Exch 12½pc 1990‡‡	106	6.1	10.32	8.85
22 Sep 22 Mar	Exch. 12½pc 1990	111	13.2	11.20	8.82
8 Nov 8 May	Treas. 3pc 1990	89	1.4	3.35	6.00
15 Dec 15 Jun	Treas 8¼pc 1987-90‡‡	99	9.5	8.29	8.40
25 Apr 25 Oct	Treas. 10pc Cv 1990	104	19.3	9.57	8.73
22 May 22 Nov	Exch 2½pc 1990	86	15.4	2.90	6.10
10 Jan 10 Jul	Treas 11¾pc 1991	110	4.12	10.62	8.89
5 Oct 5 Apr	Funding 5¾pc '87-91‡‡	94	3.3	6.11	7.22
13 Nov 13 May	Treas. 3pc 1991	86		3.49	6.35
Five to Fifteen Years					
25 Apr 25 Oct	Exch. 11pc 1991	[illegible]			
22 Jly 22 Jan	Treas 12¾pc 1992	[illegible]			
[illegible]					
Over Fifteen Years					
[illegible]					
Undated					
[illegible]					
Index-Linked					
[illegible]					

INT. BANK AND O'SEAS GOVT STERLING ISSUES

[illegible]

CORPORATION LOANS

[illegible]

COMMONWEALTH & AFRICAN LOANS

[illegible]

LOANS

Building Societies

[illegible]

Public Board and Ind.

[illegible]

Financial

[illegible]

FOREIGN BONDS & RAILS

[illegible]

AMERICANS

[illegible]

AMERICANS—Cont.

Dividends Paid	Stock	Price £	Last xd	Div Gross	C'vr	Y'ld Gr's
Oc Ja Ap Jy	Campbell Soup 30c	38¾	6.1	$1.32	—	2.4
F My Au N	Caterpillar Tractor‡	37	16.4	50c	—	0.9
Ja Ap Jy Oc	Cenergy Corp. 25c	445p	30.8	4c	—	0.5
Fb.My.Ag.Nv.	Chase M'htn $12.5	38½	25.4	$2.05	—	4.6
Ap Jy Oc Ja	Chemical New York	38½	11.3	$2.60	—	4.9
Mar Jun S D	Chesebrough-Pond's $1	34¾	27.2	$2.00	—	3.9
Mar Jun S D	Chrysler $6¼	26¾	12.3	[illegible]	—	1.7
My Au N F	Citicorp $4	42½	24.3	$2.28	—	3.6
Fb My Ag Nv	CityFed Fin. Corp.	18½	30.12	40c	—	2.5
F My Au N	Colgate-P. $1	27	22.4	$1.36	—	3.4
Mr.Ju.Se.De.	Colt Inds. $1	47	11.3	$2.50	—	3.6
—	Cons Freightways $0.625	30¾	6.5	$1.10	—	2.5
—	Cont'l Illinois Corp $1	500p	—	—	—	—
—	Cont Illinois Hldgs $1	42p	3'84	—	—	—
—	Corporate Data Scnce	41	—	—	—	—
Ja Ap Jy Oc	Crown Zell. $5	31¾	5.12	$1.00	—	2.2
—	Cullinet Sftwr $0.1	10½	—	—	—	—
—	Damson Oil 40c	225p	—	—	—	—
Mar Jun S D	Dana Corp. $1	22½	22.5	$1.28	—	3.8
—	Data General	26½	—	—	—	—
—	Denver-Lock Medel	15p	—	—	—	—
Mr Je Sp Dc	Dun & Bradstreet $1	78½	17.2	$2.56	—	2.2
F My Au N	Eaton Corpn. 50c	46	30.4	$2.60	—	2.3
Mar Jun S D	Exxon$1	40	7.11	$3.60	—	6.1
Mr.Je.Sep.Dec	FPL Group $0.01	20¾	27.5	$2.04	—	6.7
—	Fairmont Fin.	22	—	—	—	—
F May Au N	Fst. Corpn. Amer. 50c	882p	25.6	—	—	—
Jan Apr Jly O	First Chicago $5	23	4.3	$1.32	—	3.8
Mar Jun S D	Ford Motor $2	54	29.4	$3.30	—	4.1
Mar Jun S D	GATX 62½c	23	25.2	$1.20	—	3.5
April Oct	Gen. Elect. $1¼	54½	3.12	$2.32	—	2.9
Mar Jun S D	Gillette $1	29½	28.4	$2.72	—	6.2
Fb.My.Aug.Nv.	Gt Atl First Svgs Bk $1	18	12.5	64c	—	1.5
Fe.My.Au.Nv.	Gt. Western Fin. $1	27½	30.4	$1.20	—	—
Ja Ap Jy Oc	Hasbro Inc $0.50	33	15.4	15c	—	0.3
Mar Jun S D	Honeywell $1.50	52	25.2	$2.00	—	—
[illegible]						

CANADIANS

[illegible]

BANKS, HP & LEASING

[illegible]

Hire Purchase, Leasing, etc.

[illegible]

BEERS, WINES & SPIRITS

[illegible]

BUILDING, TIMBER, ROADS

[illegible]

BUILDING, TIMBER, ROADS—Cont.

[illegible]

CHEMICALS, PLASTICS

[illegible]

DRAPERY AND STORES

[illegible]

DRAPERY & STORES—Cont.

[illegible]

ELECTRICALS

[illegible]

ENGINEERING

[illegible]

ENGINEERING—Continued

[illegible]

FOOD, GROCERIES, ETC.

[illegible]

HOTELS AND CATERERS

[illegible]

INDUSTRIALS (Miscel.)

[illegible]

INDUSTRIALS—Continued

[illegible]

INDUSTRIALS—Continued

Dividends Paid		Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's	P/E
July	Jan	Midland Marts	145	25.11	4.0	2.1	3.9	17.1
Jan	May	Mitchell Cotts	72½	10.3	4.25	1.5	8.3	10.2
—		Monks & Crane 10p	166	—	12.7	♦	3.6	♦
Jan	July	Morgan Crucible	318	28.4	8.5	♦	3.9	♦
May		Morris (W) F.A. 20p	18	—	—	—	—	—
Jan	Aug	Moss (Robt.) 10p	131	25.11	♦3.3	2.2	3.6	13.9
July		Myson Grp 10p	106xd	12.5	2.63	2.6	3.5	13.7
Nov	June	MVW Computers	315	24.2	6.0	3.0	1.0	18.1
Mar.	Sept.	Nash Inds.	32	13.1	0.5	—	2.2	—
—		Ned & Spencer 10p	24	3'81	—	—	—	—
Jan	July	Newman Inds 10p	35	14.4	0.8	1.2	3.3	( )
April	Dec	Molton	50	11.11	10.95	7.0	2.7	7.1
—		Morank Systems 5p	118	—	u3.0	♦	3.6	♦
Jan.	Aug.	Norcros	260	21.12	10.6	2.0	4.7	14.2
Oct.	April	Nu-Swift 5p	98xd	12.5	3.5	2.1	5.0	13.2
Feb.	Aug.	Oakwood Grp.	100	27.1	5.0	1.3	7.0	13.9
Dec	July	Office & Elect	235	28.10	8.5	2.9	5.2	9.4
October		Olazore 20p	85	10.2	♦4.0	2.4	6.6	7.5
—		Optometrics $0.01	26	—	u0.02c	2.1	6.0	8.7
May	Nov	Oriflame £1	755	28.4	24.5	2.1	4.6	14.7
Jan.	June	Ovenstone 12½c	8xd	12.5	g0.23c	1.9	12.0	4.4
May	Nov.	Ozalid 9pc Cnv 87-92	£262	14.4	Q9%	—	(3.5	—
December		PCT Grp 10p	130	25.11	3.2	1.2	5.1	(32.0
April		PLM 'B' Sk 25	£15¼	3.4	Q23.2%	0.5	4.2	—
June	Dec	PSM Intl.	184	11.11	d6.5	2.1	4.3	13.8
—		Pacer Systems $0.01	200	25.4	L03.84c	3.4	1.3	22.3
Apr.	Dec.	Pacific Sales 10p	62	1.4	3.0	1.2	6.8	16.9
May	Nov	Park Place 10p	352	1.4	♦16.25	1.9	2.7	27.9
Apr	Nov	Parker Knoll 'A'	415	1.4	19.5	2.9	3.2	15.1
February		Parkfield Group 5p	460	21.12	†2.4	2.4	0.7	76.9
—		Pavion Intl	36	—	—	—	—	♦
Aug.	Feb.	Do 11pc Cnv Ln '94-02	£108	10.2	Q11%	—	6.9	—
June	Nov	Pearson	448	14.4	10.0	2.8	3.1	15.0
—		Peek Holdings 7p	25	—	—	—	—	—
Mar	Oct	Peerless	125	10.2	6.3	—	7.1	—
July	Nov	Pentland 10p	600xd	12.5	1.5	22.4	0.3	19.3
May	Dec.	Photo-Me	£18	24.2	†5.00	8.3	0.7	20.4
Feb.	Aug.	Pilkington Br. £1	433	21.12	12.5	2.5	4.1	10.7
June	Dec.	Pitney-Bowes Cnv. Ln.	£363	25.11	Q5½%	—	1.5	—

LEISURE—Continued

Dividends Paid		Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's	P/E
Jan	July	Leisuretime Int 10p	105	1.4	2.3	♦	3.1	♦
—		Lowndes	107	—	u2.63	3.0	3.5	13.2
14.2		Media Tech Int 20p	153	24.2	L2.58	5.4	2.4	12.4
Apr.	Dec.	Medminster 10p	190	10.3	†5.35	2.7	5.4	9.5
Oct	May	Miss World 10p	200	1.4	5.2	3.3	3.7	11.6
May	Oct	Nationwide Leisure	90xd	12.5	(3.75)	♦	5.9	♦
—		Naude Int 20c	16	—	—	—	—	—
July		Owners Abroad 5p	29¼	28.4	1.5	♦	7.1	♦
—		Pleasurama (Lon.)	65	4'82	—	—	—	♦
Apr	Sept	P'dilly Radio NV 5p	29½	24.2	2.8	1.2	9.5	12.5
—		Pineapple Dnc St 10p	65	12'84	—	—	—	—
Sept.	Apr.	Pleasurama 5p	303xd	12.5	7.5	3.2	3.5	12.5
Sept.	Mar.	Do. 7pcCvCmRedPf	141	10.2	7%	—	7.0	—
		For Pres Entertainment see Hotels						
—		Radio City 'A' NV	30	12'84	—	—	—	—
Jan	July	Radio Clyde NV	47	21.12	3.25	0.9	10.0	14.9
—		Really Useful Grp 5p	360	1.4	b11.25	2.2	4.4	14.8
—		Riley Leisure 10p	44	10'84	—	—	—	—
Apr.	Nov.	Saga Hols. 20p	165	10.3	4.6	2.6	3.9	14.0
Apr	Nov	Samuelson Grp 20p	295	24.2	†2.4	6.0	1.1	23.1
Jan	July	Sangers Photo 10p	104	28.10	♦2.0	1.9	2.7	27.2
July	Dec	Scanro 50p	160	11.11	4.0	3.5	3.6	11.3
Dec	May	Scott. TV 'A' 10p	345	14.4	n10.5	3.0	4.3	10.9
		SeaCo Inc $0.125	106	1'84	—	—	—	—
—		SelecTV 10p	18	—	—	—	—	—
—		Spectrum 5p	22	—	†1.2	4.8	‡	23
May	Nov	TSW 5p	39	1.4	†1.7	2.4	6.1	9.4
Mar	Aug	TVS N/Vtg 10p	232	10.2	8.0	2.5	4.9	11.8
May	Oct	Television Svcs 50p	133	28.4	2.0	1.6	2.1	42.7
Apr	Nov	Tottenham Hotspur	62	16.9	♦4.0	—	‡	—
February		TriMon 10p	87	13.1	L1.1	3.3	1.8	18.3
	Dec	Tyne Tees TV 'A' £1	245	1.4	a10.5	♦	6.0	♦
Jan	July	Ulster TV N/V 'A'	130	28.4	†5.25	2.6	5.7	9.6
February		Visionplan 5p	82	13.1	u1.26	—	2.2	16.0
—		WSL 5p	186	—	—	—	—	—
April	Sept	Webb (Jos.) 5p	23	10.2	d0.5	0.2	3.1	61.8
	July	Williams (Rex) 5p	21	10.3	0.91	1.8	6.1	21.8
Apr.	Nov.	Zetters 5p	164	10.2	♦4.0	3.6	3.4	11.5

MOTORS, AIRCRAFT TRADES

MINES—Continued

Dividends Paid		Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's
—		Essex Int. Ir10p	35	—	—	—	—
—		Greenwich Res.	95	—	—	—	—
Apr	Oct	Hampton Areas 10p	140	23.12	♦3.75	0.9	3.6
—		Highwood Res.	345	—	—	—	—
Fb Jan Ag	Nv	Homestake Mining $1	£15¼	30.1	Q20c	—	0.9
—		McFinley Red Lake	90	—	—	—	—
—		Musto Explorations	280	—	—	—	—
—		New Sabina Res C$1	37	—	—	—	—
—		Northgate C$1	215	9'77	—	—	—
Jan.	July	RTZ	655xd	12.5	22.0	2.8	4.7
Jan	July	Do. 9¾pcLn '95-2000	£139xd	12.5	Q9¾%	15.5	17.0
—		Tara Expln $1	875	—	—	—	—

NOTES

Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on "net" distribution basis, earnings per share being computed on profit after taxation and unrelieved ACT where applicable; bracketed figures indicate 10 per cent or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution; this compares gross dividend costs to profit after taxation, excluding exceptional profits/losses but including estimated extent of offsettable ACT. Yields are based on middle prices, are gross, adjusted to ACT of 29 per cent and allow for value of declared distribution and rights.

- ● "Tap Stock".
- * Highs and Lows marked thus have been adjusted to allow for rights issues for cash.
- † Interim since increased or resumed.
- ‡ Interim since reduced, passed or deferred.
- ‡‡ Tax-free to non-residents on application.
- ♦ Figures or report awaited.
- ♥ Not officially UK listed; dealings permitted under Rule 535(4)(a).
- ✝ USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- †† Dealt in under Rule 535(3).
- $ Price at time of suspension.
- ¶ Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividend or forecast.
- ♦ Merger bid or reorganisation in progress.
- ♣ Not comparable.
- ♠ Same interim: reduced final and/or reduced earnings indicated.
- ♠ Forecast dividend; cover on earnings updated by latest interim statement.
- ‡ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ☆ Cover does not allow for shares which may also rank for dividend at a future date. No P/E ratio usually provided.
- ll No par value.

B.Fr. Belgian Francs. Fr. French Francs. ◆◆ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock. a Annualised dividend. b Figures based on prospectus or other offer estimate. c Cents. d Dividend rate paid or payable on part of capital, cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast, or estimated annualised dividend rate, cover based on previous year's earnings. v Subject to local tax. x Dividend cover in excess of 100 times. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. E Minimum tender price. F Dividend and yield based on prospectus or other offical estimates for 1984-85. G Assumed dividend and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1986. K Figures based on prospectus or official estimates for 1984. L Estimated annualised dividend, cover and p/e based on latest annual earnings. M Dividend and yield based on prospectus or other official estimates for 1985-86. N Dividend and yield based on prospectus or other official estimates for 1985. P Figures based on prospectus or other official estimates for 1983. Q Gross. R Forecast annualised dividend, cover and p/e based on prospectus or other offical estimates. T Figures assumed. Z Dividend total to date.

Abbreviations. xd ex dividend; xc ex scrip issue, xr ex rights, xa ex all, xi ex capital distribution.

REGIONAL & IRISH STOCKS

The following is a selection of Regional and Irish stocks, the latter being quoted in Irish currency

Albany Inv 20p	122xd		Fin 13% 97/02	£123¾	
Craig & Rose £1	£13		Arnotts	320xd	
Finlay Pkg. 5p	43xd		CPI Hldgs	58	
Holt (Jos) 25p	818		Carrol Inds.	175	−2
Ioll Sue £1	87	−3	Dublin Gas.	53	
			Hall (R & H.)	77	
IRISH			Heiton Hldgs.	28	−1
Fund 11¼% 1988	£103⅝		Irish Ropes	100	
Nat 9¾% 84/89	£101		Unidare	190	

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CONSTRUCTION CONTRACTS

Exploring the many possibilities down below

BY JOAN GRAY, CONSTRUCTION CORRESPONDENT

MR Derek Russell, director of Alphacrete Construction, gets very emotional about sewers. Not to say positively passionate about them and their possibilities for job creation.

"I want to preach a new philosophy of sewer renovation," he says. "I've developed a labour-intensive system for sewer repair which is suitable for all man-entry sewers, and 30 per cent cheaper than higher-technology methods. It could put thousands of unemployed unskilled teenage and 20-year-olds back to work."

Having completed sewer renovation contracts at Rochdale in Lancashire and London' Acton and Hammersmith—the latter a £100,000 repair at Countess Creek—Alphacrete is now working on a contract to renovate one of Britain's oldest sewers, the Larkbeare sewer in the heart of the cathedral city of Exeter in Devon.

The Larkbeare sewer has a Roman floor, medieval stone walls, and a brick roof added in the 17th century to prevent the stench reaching the town. It has been known since at least the 14th century as the *Shutebrook* or *Shitbrook*.

The massive stone sides which were once at the base of the now-vanished Larkbeare Castle are still intact, but the 17th century brickwork roof is giving trouble. The courses of brick are being forced apart by the weight of the houses and roads above, threatening the sewer with collapse.

Alphacrete's contract involves strengthening and relining 94 metres of the sewer, using its Ruswroe repair technique.

At £26,000 for the section, the contract is only small beer. But it is being evaluated by the Water Research Council, and if the method is approved for wider acceptance Mr Russell hopes it could be used for repairs throughout Britain's crumbling sewer network.

The outlook is promising, as the WRC's initial opinion is that it is a versatile system with the advantage that it can be tailored to any shape of sewer. This makes it more flexible than some other techniques for relining man-entry sewers.

Mr Russell is also negotiating a $26m contract for relining sewers in Florida, and is discussing some larger sewer relining contracts in San Francisco and New York.

The Ruswroe process — which Mr Russell developed after he himself had been made redundant — simply involves relining the sewer with steel mesh and cement mortar.

The procedeure being used for the Larkbeare sewer is slightly more complicated, as steel hoops are used to strengthen the walls before the mesh is *put* into place. But the basic process is the same, and has the same advantage of using simple materials which are easy to use and store on site.

The process also has the advantage of making it unnecessary to dig the sewer up, as the light planks of steel mesh are carried down into the sewer through the existing manholes and fastened into place round the walls using a fixing device and plastic spacer.

Cement mortar is pumped into the sewer to an injection head, and the operator uses it to fill in the spaces behind and between and over the mesh. This is smoothed by hand to create a new lining with high structural strength and minimum loss in size of the sewer.

It sounds simple. And it is.

As Mr Russell puts it, "I wanted to get back to Victorian ways of mending the sewers the Victorians built, with a process that was as simple as possible and created as many jobs as possible."

Relining a sewer using the Ruswroe method requires a minimum crew of five men—two mixing the mortar on the surface, two in the sewer manning the pump and applying the mortar, and a site foreman.

Several crews can operate down a sewer at the same time if the contract requires it, with the output per man in a five-man crew being 1.2 sq metres of sewer renovated per man per hour.

Working down a sewer is not the most pleasant of occupations.

After crawling along inside the Larkbeare culvert myself, complete with protective dungarees, boots, hat and heavy-duty gloves — albeit marvelling at the quality of the long-buried Roman and medieval stonework—I can vouch for this.

It is when contemplating the employment implications of his techniques that Mr Russell waxes most eloquent.

"If the Government spent more on sewer renovation it could protect a vital asset that we've been ignoring since Victorian times, and find employment for 6,000 unskilled people who need a job and can't get one in these days of high technology," he said.

His pleas for more spending on the sewers is backed by the Institution of Civil Engineers, which also wants to see more spent on the infrastructure.

Mr Don Reeve, president of the ICE and retired chief executive of the Severn Trent Water Authority, estimates that no more than a third of the £800m a year currently spent on capital works by the water authorities—say £200m a year—is spent on sewer repairs.

"And I think we could and should have a 50 per cent increase in the amount spent on sewers," he said.

The trouble is, as any water engineer will say ruefully, sewage tends to be a Cinderella industry, with less power to attract new spending than schools or hospitals.

Perhaps it needs Princess Di to don the heavy duty dungarees and rubber gloves and declare a newly-lined stretch of sewer open.

Arts centre, hospital and housing orders

Three contracts, together worth over £28m, have been won by the LLEWELLYN GROUP. At Crawley, the Borough Council has placed an order for a multi-purpose arts centre at a cost of £5.8m. The flexible design will provide space for traditional theatre and music as well as apron stage, banqueting and exhibitions. The auditorium, for up to 800 people, will have retractable seating and an adjustable orchestra pit at stalls level The restaurant and rehearsal spaces are accommodated in linked pavilions.

In London's Dockland work has started on a £10.5m housing project of 134 flats and 38 houses, which are to be built around the three sides of Shadwell Basin. The development by The Sanctuary Land Company is being funded by The Halifax Building Society and will cover all sectors of the market. The smaller dwellings are to be cross-subsidised to provide low-cost homes for first time buyers. Selling prices are likely to range from just over £40,000 for a one-bedroom flat, to almost £200,000 for a four-bedroom house.

The third contract, awarded by the South East Thames Regional Health Authority is for Phase II of the Eastbourne and General District Hospital and will cost just over £12m. The work includes a clinical block, a psychiatric block, residential units, extensions to the X-ray and works departments, together with alterations to the hospital —which was built by Llewellyn 10 years ago.

QUARMBY CONSTRUCTION COMPANY, Ilkley, has been awarded contracts valued at £3.3m, all in the retail sector. Largest is the retail park at Canal Rd, Bradford, to be occupied by Harris Queensway, W. H. Smith Do It All and Power City. Other projects include retail units at Keighley, Wakefield and Crewe for W. H. Smith Do It All, Sainsbury Homebase and Comet.

★

The construction division of MARPLES INTERNATIONAL has been awarded a £1.36m contract by Alnwick District Council, Northumberland, to design and construct a 250-berth marina on the River Coquet estuary.

A contract, worth £1.75m, has been won by H. PEEL, Sowerby Bridge, to carry out refurbishments and additions to the 105-bedroom Spider's Web Hotel, Watford. The additions comprise 65 bedrooms and a leisure complex, which includes a swimming pool and gymnasium.

Matthew Hall wins £35m work

Orders worth over £35m have been received by MATTHEW HALL MECHANICAL & ELECTRICAL ENGINEERS. IDC at Stratford-upon-Avon, has been awarded a £2m guaranteed maximum price design and construct contract by Reckitt & Colman fine arts and graphics division (which includes such household names as Windsor & Newton and Reeves). This contract is for the first phase of the redevelopment of the Wealdstone site which involves building of a 2-storey production block and packing material warehouse.

Refurbishing Nato centre

A range of building contracts, together worth over £4.5m, have been secured by CRUDEN CONSTRUCTION. Housing work takes a £3.5m share with contracts involving the design and construction of over 130 new homes in Liverpool and Merseyside. At Wallasey on Merseyside 35 new homes are about to commence, while at Latimer Street in the centre of Liverpool a contract has been let by the City of Liverpool for the construction of 47 new homes in 52 weeks. A contract to build 48 bungalows, a community hall and a warden's house, has also been secured in Liverpool from Merseyside Improved Homes.

★

A £5.1m contract to refurbish and partially rebuild a Nato communications centre in Gibraltar has been awarded to TAYLOR WOODROW INTERNATIONAL by the Property Services Agency. Work will start in June and is scheduled for completion in November 1988. The centre is located inside the Rock and the project involves stabilisation of some of the limestone caverns, together with the demolition and rebuilding of various structures in the centre. The services, including air conditioning and ventilation, will be upgraded.

WORLD STOCK MARKETS

AUSTRIA

1986 High	Low	May 30	Price Sch
2,650	2,247	Credit'nst'lt pp *	2,275
3,850	3,075	Goesser *	3,470
16,000	13,300	Interunfall *	14,400
21,780	18,000	Jungbunzlauer *	19,350
2,475	1,950	Laenderbank *	2,250
795	635	Perlmooser	665
211	150	Steyr Daimler	176
12,500	8,850	Veitscher Mag *	11,165

BELGIUM/LUXEMBOURG

1986 High	Low	May 30	Price Frs.
3,500	2,290	B.B.L.	3,070
15,600	9,600	Banq. Gen. Lux	15,600
17,000	9,400	Banq. Int.A.Lux.	16,800
14,500	6,250	Bekaert	12,500
4,660	2,640	Ciment CBR	3,776
195	148	Cockerill	148
13,100	8,310	Delhaize	13,100
4,940	3,580	EBES	4,400
17,350	10,495	Electrobel	15,125
2,700	1,970	Fabrique Nat	2,410
7,760	3,880	GB Inno BM	7,480
4,525	2,695	GBL (Brux)	3,170
6,800	4,310	Generale Bank	6,350
6,850	4,750	Gevaert	6,050
8,150	5,700	Hoboken	7,180
3,995	2,880	Intercom	3,670
16,300	10,100	Kredietbank	16,300
11,250	9,900	Pan Hldgs	11,150
7,950	6,050	Petrofina	7,850
26,000	17,200	Royale Belge	23,100
3,270	2,120	Soc. Gen. Belge	3,000
11,600	7,710	Sofina	10,000
8,920	6,050	Solvay	8,000
685	460	Stanwick Intl.	460
6,340	4,675	Tractionel	6,000
7,400	5,300	UCB	7,380
6,200	3,705	Wagons Lits	5,980

DENMARK

1986 High	Low	May 30	Price Knr. ?
424	356	Andelsbanken	356
670	516	Baltica Skand.	635
348	273	Cop Handelsb'nk	273
470	370	D. Sukkerfab	375
381	322	Danske Bank	322
1,660	1,480	De Danske Luft.	1,630
298	212	East Asiatic	212
1,240	900	Forenede Brygg.	1,140
268	204	Forenede Damp.	215
665	470	GNT Hld.	490xr
820	566	I.S.S.B.	675
845	555	Jyske Bank	655
273	258	Novo Inds*	267
339	264	Privatbanken	267
470	324	Provinsbanken	324
339	278	Smidth (F.L.) B	284
1,020	885	Sophus Berend	885
331	250	Superfos	255

FRANCE

1986 High	Low	May 30	Price Frs.
1,630	1,473	Emprunt 4½% 1973	1,571
7,966	7,190	Emprunt 7% 1973	7,968
493	298	Accor	399
845	608	Air Liquide	760
718	508	BIC	629
2,210	1,610	Bongrain	1,850
1,285	909	Bouygues	1,065
4,140	2,730	BSN Gervais	3,490
2,500	1,368	CIL Alcatel	2,020
3,885	2,950	Carrefour	2,700
625	458	Club Mediter'n	604
1,386	872	Cie Bancaire	1,105
468	347.5	Cofimeg.	453
2,585	1,721	Damart	1,998
3,410	2,152	Darty	3,083
1,470	1,050	Dumez S.A.	1,300
1,688	877	Eaux (Cie Gen)	1,249
373	196	Elf Aquitaine	311
2,905	2,000	Essilor	2,650
1,020	714	Gen.Occidentale	895
115.5	75.8	Imetal	75.8
1,613	745	Lafarge Coppee	1,275
3,960	2,805	L'Oreal	3,350
4,080	2,640	Legrand	3,720
350	169	Maisons Phenix	240
2,639	1,480	Matra S.A.	2,120
3,459	1,725	Michelin B	2,745
6,670	4,550	Midi (Cie)	5,700
2,650	1,875	Moet Hennessy	2,280
115	64.7	Moulinex	93
241	167.5	Nord Est	192.5
1,265	807	Pernod Ricard	1,207
736	481	Perrier	709
404	296	Petroles Fra.	370
1,150	512	Peugeot S.A.	920
738	417	Printemps (Au)	563
995	421	Radiotech.	820
2,600	1,740	Redoute	1,890
1,799	1,302	Roussel Uclaf	1,470
587	390	Sefimeg	523
1,490	1,100	Skis Rossignol	1,340
3,855	2,640	Telemec Elect	3,185
1,439	822	Thomson (CSF)	1,320
619	348	Valeo	474

SWITZERLAND

1986 High	Low	May 30	Price Frs.
6,450	4,480	Adia Intl.	6,325
765	630	Alusuisse	705
4,850	3,540	Bank Leu	3,600
2,285	1,620	Brown Boveri	1,895
4,550	3,450	Ciba Geigy	3,550
3,425	2,510	do. (Part Certs)	2,680
3,910	3,100	Credit Suisse	3,800
3,890	3,370	Elektrowatt	3,575
1,675	1,125	Fischer (Geo.)	1,610
141,000	111,750	Hoff-Roche PtCts	113,000
14,000	11,150	Hoff Roche 1/10	11,400
8,225	7,100	Jacobs Suchard	7,720
3,850	3,100	Jelmoli	3,450
2,355	1,850	Landis & Gyr	1,900
9,500	8,000	Nestle	8,400
2,040	1,420	Oer Buehrle	1,840
495	378	Pirelli	458
13,375	10,200	Sandoz (Br)	12,300
2,050	1,630	Sandoz (Pt Crs)	1,790
900	770	Schindler (PtCts)	790
1,980	1,500	Sika	1,600
7,210	5,900	Surveillance A.	7,210
2,220	1,635	Swissair	1,700
625.5	534	Swiss Bank	564
19,700	13,200	Swiss Reinsce	19,700
2,750	2,340	Swiss Volksbk	2,530
5,790	4,850	Union Bank	5,610
6,600	4,626	Winterthur	6,300
8,775	5,750	Zurich Ins.	8,250

GERMANY

1986 High	Low	May 30	Price Dm
360	265	AEG	317
2,875	1,190	Allianz Vers.	2,423
331.8	260.2	BASF	280
350	270	Bayer	299.5
688	518	Bayer-Hypo	538
675	458	Bayer-Verein	540
593	465	BHF-Bank	503
645	483	BMW	576
328	252.5	Brown Boveri	318
377.5	268	Commerzbank	309.bxr
284.5	205	Cont'l Gummi	244.5
1,549.5	1,147	Daimler-Benz	1,335
534	426	Degussa	452
240	190.5	D'sche Babcock	200
920	723.7	Deutsche Bank	785
505	353.5	Dresdner Bank	414
		Feld-Meuhle N61	307.1
280	205	GHH	213.5
459	380	Henkel	401
960	710	Hochtief	960
327	259.8	Hoechst	251.8xr
201	157	Hoesch Werke	183.5
650	470	Holzmann (P)	515
246	185.2	Horten	189.9
527	426	Hussel	490
405	329	Karstadt	329
492	550	Kaufhof	481
393	254	KHD	261.5
125	90	Kloeckner	91
775	579	Linde	705
311.8	208	Lufthansa	213
247	179	MAN	186
511.8	210.5	Mannesmann	217
1,374	993	Mercedes Hld.	1,180
430	305	Metallgesell	343
4,350	2,850	Muench Rueck	2,850
660	548	Nixdorf	584
1,420	1,015	Porsche	1,180
297	198	Preussag	188
275	195	Rhein West Elect	228
398	330	Rosenthal	380
670	514	Schering	579
885.5	606	Siemens	614.8
198	158	Thyssen	163.5
390	259	Varta	334
346	272	Veba	281
208	140	V.E.W	164.5
560	592	Verein-West	513
684	495	Volkswagen	561.8

NORWAY

1986 High	Low	May 30	Price Kroner
172.5	142	Bergens Bank	150
477.5	384	Borregaard	387.5
179	151.5	Christiania Bank	163.6
185	146	Den Norske Cred	152
126	94	Elkem	109.5
197.5	139	Kosmos	142
191	120	Kvaerner	127.5
186.8	90	Norcem	93.5
243.7	200	Norsk Data	215.5xc
150.5	122	Norsk Hydro	150.5
285	205	Storebrand	214

HONG KONG

1986 High	Low	May 30	Price H.Kg.
25.7	18.4	Bank East Asia	19.3
5.70	5.15	Cathay Pacific	5.7
22	17.9	Cheung Kong	20.7
17.2	15	China Light	16.2
0.75	0.59	Evergo	0.63
40.4	35	Hang Seng Bank	36
2.20	1.65	Henderson Land	2.12
15.7	11.8	HK China Gas	15.4
9.30	8.3	HK Electric	9.4
7.8	5.2	HK Kowloon Wh.	6.9
6.95	5.5	HK Land	6.1
7.50	6.25	HK Shanghai Bk.	6.85
11.9	9.3	HK Telephone	11.9
31.5	24	Hutchison Wpa.	29.8
14.6	11	Jardine Math	12.5
7.15	5.5	New World Dev.	6.2
13.4	10.6	SHK Props	12.4
1.15	0.91	Shell Elect	0.94
14.3	9.9	Swire Pac A.	12.5
6.80	5	TV—B	6.8
—	—	Winsor Inds.	0.04
2.77	2.07	World Int. Hldgs.	2.37

SWEDEN

1986 High	Low	May 30	Price Kronor
230	175	AGA	190s
378	245	Alfa-Laval B	367
383	205	ASEA (Free)	330xc
605	490	Astra (Free)	585
252	166	Atlas Copco	222
306	265	Cardo (Free)	306
248	159	Cellulosa	248
312	194	Electrolux B	281
299	216	Ericsson B	266
570	460	Esselte	570
291	178	Mo och Domsjo	231
252	167	Pharmacia	225
890	495	Saab Scania Free	850
930	675	Sandvik	860
526	330	Skandia	500
389	286	SKF	347
190	136	Sonneson	190
318	157	Stora Kopparbrg	318
373	220	Swedish Match	342
433	300	Volvo B (Free)	452

SOUTH AFRICA

1986 High	Low	May 30	Price Rand
3.00	1.8	Abercom	2.20
12	8.90	AE&CI	10.8
70	53	Allied Tech	70
60.50	38.5	Anglo Am Coal	44.75
46	38.5	Anglo Am. Corp.	44.35
247	206	Anglo Am. Gold	222
22	18.85	Barclays Bank	20
18.00	14.35	Barlow Rand	17.7
90	62	Buffels	72.5
2.6	1.85	CNA Gallo	2.5
6.35	4.3	Currie Finance	4.9
26.5	16.7	De Beers	25
56.5	49.25	Driefontein	53.0
40.25	29.25	F.S.Cons.	39.5
43	33.25	Gold Fields S.A.	34
16.3	5	Highveld Steel	6.70
9.85	6.2	Malcor	9.90
9.5	5.75	Nedbank	6.0
14.75	11.5	OK Bazaars	14.25
60	45	Rembrandt	58.5
36	26	Rust Plat	32.50
17.4	13	Safren	16.25
11.4	9.5	Sage Hldgs	10.5
10.7	8.2	SA Brews	10.10
30.5	24	Smith (CG)	28.5
8.4	7.4	Tongaat Huletts	7.50

SINGAPORE

1986 High	Low	May 30	Price $
1.19	0.76	Boustead Hldgs.	0.95
2.88	2.17	Cold Storage	2.88
5.60	4.4	DBS	5.60
4.54	3.3	Genting	4.08
2.36	1.64	Haw Par. Bros.	2.36
2.50	1.74	Hong Leong Fin.	2.09
1.64	1.02	Inchcape Bhd.	1.56
1.26	0.4	Keppel Shipyard	1.26
4.66	3.04	Malay Banking	3.04
1.69	0.96	Malay Utd Ind.	1.26
0.6	0.30	Multi Purpose	0.37
7.55	5.85	OCBC	6.45
2.6	2.12	OUB	2.59
1.78	0.60	Public Bank	0.67
1.32	0.82	Sime Darby	1.32
6.80	6.65	Singapore Air	6.40
6.80	5.5	Singapore Press	6.80
2.48	1.86	Straits Trdg.	2.47
2.22	1.91	Tat Lee Bk.	2.25
3.38	2.22	UOB	3.28

ITALY

1986 High	Low	May 30	Price Lire
34,995	19,980	Banco Com'le	28,025
785	746	Bastogi-IRBS	830
4,780	3,050	Centrale	3,981
16,400	6,160	C.I.R.	15,000
4,590	3,151	Credito Italiano	4,100
15,000	6,531	Fiat	13,600
166,900	75,150	Generali Assicur.	145,800
79,850	46,200	Italcementi	70,500
1,430	920	La Rinascente	1,201
4,533	2,705	Montedison	3,259
18,890	8,710	Olivetti	16,800
8,970	6,085	Pirelli Co.	7,530
6,510	3,570	Pirelli Spa	5,690
6,888	4,780	Saipem	5,400
7,650	4,944	Snia BPD	6,035
64,000	24,250	Toro Assic.	37,450

AUSTRALIA

1986 High	Low	May 30	Price Aust. $
3.80	2.55	ACI Intl	3.62
16.6	11.5	Adelaide Steams	13.0
3.8	2.88	Amcor	3.65
6.3	4.4	ANZ Group	5.7
3.22	2.26	Ampol Pet.	2.46
1.78	1.15	Ashton	1.7
3.55	2.1	Aust. Guarantee.	3.3
5.70	2.88	Aust. Nat. Inds.	5.6
9.9	5.9	Bell Group	8.7
5.79	3.70	Bell Res.	4.3
3.56	1.05	Bond Corp Hldgs	3.28xr
5	3.25	Boral	4.88
2.72	1.9	Bougainville	2.72
7.10	4.3	Brambles Inds	7.0
1.89	0.59	Bridge Oil	0.80xr
9.1	6.32	B. H. Prop.	8.78
7.50	5.3	Burns Philip	7.2
7.4	5.48	CRA	6.4
3.78	2.92	CSR	3.4
9.40	5.4	Chase Corp.	8.2
1.24	0.80	Claremont Pet.	0.80
6.4	4.1	Coles Myer	5.86
2.50	1.80	Comalco "A"	2.45
0.25	0.14	Consolidated Pet	0.17
2.70	2.20	Costain Aust	2.20
4.68	2.0	Elders IXL	4.38
1.82	1.50	Energ Res.	1.55
2.78	2.16	Gen. Prop. Trust	2.75
3.70	3.18	Hardie (James)	3.4
2.12	1.60	Hartogen Energy	1.85
7.10	4.85	Herald W'yTimes	6.9
2.8	2.12	ICI Aust.	2.7
0.24	0.18	Jimberlana F.P.	0.19
0.2	0.14	Kia Ora Gold	0.14
6.6	4.9	Kidston Gold	5.5
9.8	5.74	Land Lease	9.14
3.12	2.10	MIM	2.29
3.85	3.2	Mayne Nickless	3.3
6.6	4.0	Nat. Aust. Bank.	6.14
26.0	9.02	News	22.6
3.80	2.4	Nicholas Kiwi	3.42
0.97	0.65	NorandaP'c/P/pd	0.8
2.81	1.70	North Bkn Hill	1.94
1.28	0.73	Oakbridge	0.78
4.0	2.5	Pacific Dunlop	3.65
2.9	1.72	Pancontinental	1.75
3.10	2.62	Pioneer Conc.	2.9
3.07	2.02	Poseidon	2.75
1.56	1.34	Queensland	1.6
4.8	3.9	Reckitt&Colman	4.8
2.35	1.5	Repco	2.35
5.56	3.6	Santos	4.05
5.2	4.2	Smith (Howard)	4.5
4.15	2.18	Thos. Natwide	3.7
6.7	5.2	Tooth	5.8
3.1	1.95	Vamgas	2.3
3.82	3.10	Western Mining	3.25
6.28	4.5	Westpac Bank	5.36
1.2	0.94	Woodside Petrol	0.96
3.65	3.10	Woolworths	3.25

NETHERLANDS

1986 High	Low	May 30	Price Fls
345	268	ACF Holding	345
123.2	99.3	AEGON	111.9
90.2	69.5	Ahold	84.1
181.9	149.4	AKZO	173.5
609.5	537	ABN	584.5
93.8	73.8	AMEV	83.3
117	94.5	AMRO	113
218	193	Bredero Cert.	203.5
19.9	13	Bos Kalis Westm.	15
185	136	Buehrmann-Tet.	185
33	17.5	Calland Hlgs	19.1
187.2	166.8	Dordtsche Pet'm	184.3
219	154	Elsevier-NDU	219
96.2	77.8	Fokker	90.7
304	255	Gist Brocades	289
182.6	150.0	Heineken	176.7xc
118	78.2	Hoogovens	114.5
76	55.5	Hunter Doug N/V	62.5
77.8	65.5	Int Mueller	74.3
55.8	45.4	KLM	52.1
149.5	118.7	KNP	146
63.5	47.3	Naarden	52.8
89.5	71.5	Nat Ned Cert	88.8
255.5	187.5	Ned Mid Bank	216.5
219.9	163	Nedlloyd	163
520	410	Oce Grinten	520
37.3	30.4	Ommeren (Van)	34.8
92.8	50.0	Pakhoed	54.7
65.7	55.8	Philips	57.6
94.4	82.9	Robeco	94.4
142.1	133	Rodamco	141.6
86.7	72.2	Rolinco	86.7
51.1	46.6	Rorento	50.8
197.1	164.8	Royal Dutch	194.5
471.5	347.7	Unilever	471.5
313.5	267.2	VMF Stork	301
347	270.6	VNU	347
288.5	239	Wessanen	288.5
108.5	45.7	West Utr Bank	50

JAPAN

1986 High	Low	May 31	Price Yen
1,810	1,130	Ajinomoto	1,790
1,000	745	All Nippon Air	997
2,140	1,650	Alps Electric	2,140
906	725	Asahi Chem.	853
1,280	890	Asahi Glass	1,240
865	691	Bank Tokyo	795
742	512	Bridgestone	735
657	540	Brother Inds.	624
1,200	950	Canon	1,090
1,840	1,450	Casio Comp.	1,690
1,440	921	Chugai Pharm	1,240
1,760	715	Daiei	1,520
1,700	1,470	Dai-Ichi Kan. Bk.	1,500
470	300	Dai Nippon Ink.	457
1,940	1,270	Dai Nippon Ptg	1,860
1,500	841	Daiwa House	1,400
1,520	734	Daiwa Sec.	1,490
1,650	1,320	Eisai	1,560
7,750	6,500	Fanuc	7,240
1,700	1,450	Fuji Bank	1,480
2,670	1,650	Fuji Film	2,670
2,070	898	Fujisawa	1,350
1,130	956	Fujitsu	1,050
436	394	F'jrukawa Elect.	423
2,440	1,980	Green Cross	2,280
1,120	794	Heiwa Real Est	940
912	723	Hitachi	912
1,650	1,150	Hitachi Credit	1,450
1,260	1,020	Honda	1,200
1,650	1,000	Indl. Bk. Japan	1,630
210	150	Ishikawajima Hr.	210
396	333	Isuzu Motors	365
534	413	Itoh (C)	450
4,150	2,950	Ito. Yokado	4,000
13,700	8,600	JAL	10,000
1,590	963	Jusco	1,540
894	468	Kajima	853
1,610	986	Kao Soap	1,580
173	134	Kawasaki Steel	168
1,430	737	Kirin	1,400
197	172	Kobe Steel	183
516	468	Komatsu	495
738	658	Konishiroku	723
415	339	Kubota	350
924	750	Kumagai	835
4,960	4,020	Kyocera	4,460
362	311	Marubeni	336
2,580	1,540	Marui	2,470
416	372	Mazda Motos	404
843	535	Meiji Seika	815
1,660	1,160	MEI	1,600
1,680	1,440	M'bishi Bank	1,450
742	506	M'bishi Chem	734
785	589	M'bishi Corp	770
375	328	M'bishi Elect	352
2,250	1,070	M'bishi Estate	2,010
428	353	MHI	369
1,170	951	Mitsui Bank	1,050
515	405	Mitsui	464
1,780	989	Mitsui Estate	1,650
306	209	Mitsui Toatsu	306
1,100	690	Mitsukoshi	1,090
1,120	885	NGK Insulators	980
1,090	675	Nikko Sec.	1,070
1,540	1,200	Nippon Denso	1,470
1,630	1,160	Nippon Elect	1,610
950	560	Nippon Express	810
1,610	1,350	Nippon Gakki	1,500
1,200	985	Nippon Kogaku	1,110
149	128	Nippon Kokan	142
1,230	791	Nippon Oil	1,180
614	447	Nippon Seiko	600
1,260	758	Nippon Shimpan	1,160
186	154	Nippon Steel	171
421	338	Nippon Suisan	400
510	293	Nippon Yusen	404
585	525	Nissan Motor	551
668	634	Nisshin Flour	650
2,080	1,010	Nomura	2,040
1,320	980	Olympus	1,520
468	311	Onoda Cement	440
1,190	910	Orient Finance	1,090
4,000	2,560	Orient Leasing	3,950
2,450	1,650	Pioneer	2,420
1,130	856	Ricoh	955
1,570	1,070	Sankyo	1,390
1,470	1,220	Sanwa Bank	1,290
460	386	Sanyo Elect	422
1,100	632	Sapporo	1,060
1,240	800	Sekisui Prefab	1,220
9,710	6,050	Seven-Eleven	7,830
1,050	811	Sharp	1,020
612	350	Shimizu Constn.	560
1,120	760	Shionogi	1,110
1,950	1,310	Shiseido	1,920
425	207	Showa Denko	414
4,160	3,430	Sony	3,630
2,230	1,570	S'tomo Bank	1,850
374	236	S'tomo Chem.	368
890	725	S'tomo Corp.	790
1,230	840	S'tomo Elect	1,170
156	137	S'tomo Metal	145
520	308	Taisei Corp	503
780	496	Taisho Marine	745
760	675	Taiyo Kobe Bank	720
1,650	967	Takeda	1,590
4,480	3,670	TDK	4,200
585	457	Teijin	580
1,800	1,110	Toa. Nenryo	1,640
1,030	760	Tokai Bank	995
1,430	833	Tokio Marine	1,250
4,110	2,890	Tokyo Elect Pwr	3,910
442	277	Tokyo Gas	392
957	565	Tokyu Corp	907
1,770	974	Toppan Print	1,530
632	485	Toray	578
447	357	Toshiba Elect	428
2,400	1,490	Toyo Seikan	2,360
1,660	1,130	Toyota Motor	1,560
282	200	UBE Inds.	282
3,160	1,490	Victor	3,160
775	630	Yamaha	764
1,050	680	Yamaichi Sec.	1,050
3,480	2,920	Y'manouchi Phm	3,150
1,630	777	Yamazaki	1,500
740	496	Yasuda Fire	640

SPAIN

1986 High	Low	May 30	Price Pts %
920	415	Bco Bilbao	920
736	347	Bco Central	685
470	207	Bco Exterior	440
505	207	Bco Hispano	430
1,100	439	Bco Popular	1,055
770	420	Bco Santander	660
1,340	595	Bco Vizcaya	1,275
428.5	155	Dragados	310
142	82.5	Hidrola	129
201	101.5	Iberduero	181
458	172	Petroleos	383.2
288.5	126.5	Telephonica	207.5

NOTES—Prices on this page are as quoted on the individual exchanges and are last traded prices. § Dealings suspended. xd Ex dividend. xc Ex scrip issue. xr Ex rights. xa Ex all. * Price in Danish Kroner.

CANADA

TORONTO

Closing prices May 30

[illegible]

MONTREAL

Closing prices May 30

[illegible]

F—No voting rights or restricted voting rights

Total Sales 5,107 506 shares

OVER-THE-COUNTER

Nasdaq national market, closing prices May 30

Continued from Page 35

[illegible]

NEW YORK INDICES

DOW JONES	May 30	May 29	May 28	May 27	May 23	1986 High	1986 Low	Since Cmp High	Since Cmp Low
Industrials	1876.71	1882.35	1876.28	1855.03	1825.29	1882.56 (29/5)	1502.29 (22/1)	1882.35 (29/5/86)	41.22 (2/7/32)
H'me Bnds.	90.19	90.54	90.66	90.59	90.59	91.94 (21/4)	83.75 (14/1)	—	—
[illegible]									

STANDARD AND POOR'S, N.Y.S.E. COMPOSITE, AMEX MKT. VALUE, NASDAQ OTC COMP., DIVIDEND YIELDS, TRADING ACTIVITY: [illegible]

CANADA

TORONTO Metals & Minerals, Composite; MONTREAL Portfolio: [illegible]

NEW YORK ACTIVE STOCKS

[illegible]

WORLD INDICES

	May 30	May 29	May 28	May 27	1986 High	1986 Low
AUSTRALIA All Ord. (1/1/80)	1241.0	1228.5	1236.6	1208.9	1247.6 (7/5)	1018.8 (2/1)
Metals & Minls. (1/1/80)	521.5	513.7	508.4	508.8	602.8 (24/3)	481.1 (20/5)
AUSTRIA Credit Bk Aktien (2/1/62)	130.05	(c)	130.97	121.97	158.89 (25/4)	118.12 (9/5)
[illegible]						

**Saturday May 24: Japan Nikkei 16,357.3, TSE 1,277.63.

Base values of all indices are 100 except Brussels SE—1,000, JSE Gold—255.7, JSE Industrial—264.3, and Australia All Ordinary and Metals—500; NYSE All Common—50; Standard and Poors—10; and Toronto [illegible] Metals—1,000. Toronto indices based 1975 and Montreal Portfolio 4/1/83. † Excluding bonds. ‡ 400 Industrials plus 40 Utilities, 40 Financials and 20 Transports. c Closed. u Unavailable.

Closing prices, May 30

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

12 Month High	12 Month Low	Stock	Div.	Yld	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev Close
24	12	AAH s	.44	1.8	22	314	23 3/4	23 1/2	23 5/8	-1/8
30	21 3/4	ADT	.92	3.2		178	28 5/8	28 1/4	28 3/8	-3/8
28 1/2	11 1/2	AFG s			18	1114	28	27 1/2	27 5/8	+1/8
25 5/8	12 3/8	AGS			16	26	21 1/2	21 1/4	21 1/4	-1/4
15	9 7/8	AMCA				67	13 1/2	13	13	
60 5/8	37 1/2	AMR			12	7330	59 3/4	58 1/8	58 3/8	-3/4
25 3/4	18 5/8	AMR pf2.18		8.6		20	25 1/4	24 7/8	25 1/4	+3/8
27 1/2	23 1/4	ANR pf 2.67		10.		10	26 1/4	25 3/4	25 3/4	
23 1/2	19	ANR pf 2.12		9.9		51	21 3/8	21 3/8	21 3/8	-3/8
12 1/2	7 5/8	APL			6	31	11 1/4	11	11	-1/8
16 3/4	11 1/8	ARX	.71t	5.0	13	9	14 1/8	14	14 1/8	-1/8
51 3/8	32 3/4	ASA	2a	5.7		603	35 3/8	34 1/2	35 3/8	+5/8
18 3/8	10 1/2	AVX			22	345	14 1/4	14	14 1/4	
32	22 5/8	AZP	2.72	9.8	7	863	27 7/8	27 5/8	27 5/8	-1/8
93	52 1/2	AbtLab 1.68		1.8	23	2100	u93 3/8	92 1/4	92 1/2	+3/8
46 7/8	26 1/4	AbtLb wi				113	46 3/4	46 1/4	46 1/2	-1/4
32	19 5/8	AccoWd .50		1.7	20	25	30 1/4	30	30 1/4	
24 3/4	10	AcmeC .40		3.2		98	12 1/2	12 3/8	12 3/8	-1/8
9 1/4	7	AcmeE .32b		3.9	20	19	8 1/8	8 1/8	8 1/8	
20 1/2	16 7/8	AdaEx 1.90e		9.4		92	20 1/2	20 1/4	20 1/4	-1/4
31 3/4	15	AdmMl .40		1.3	14	61	31 5/8	31	31	-3/4
20 5/8	10 1/4	AdvSys .63t		4.6	17	106	18 1/4	17 3/4	18	+1/4
32 7/8	22 1/8	AMD				6415	27 3/8	26 1/2	26 5/8	-1/2
12 5/8	8 1/4	Adobe n				40	9	8 7/8	9	
18 3/8	14 5/8	Adob pf 1.84		11.		245	16 3/8	16 1/4	16 1/4	-1/8
20 1/4	15 1/4	Adob pf 2.40		13.		6	19	19	19	
19 7/8	8 1/8	Advest .12a		.6	14	585	u20	19 3/4	19 3/4	
66 1/4	42 1/4	AetnLf 2.64		4.1	11	2479	64	63 1/4	63 5/8	-5/8
57 1/2	52 1/8	AetL pf4.28e		8.0		7	53 1/4	52 3/4	53 1/4	+1/8
69 1/4	29	Ahmns 1.38		2.1	7	2274	65 1/2	63 7/8	64 1/2	-1
23	9 5/8	Ahmn wi				193	22	21 3/4	21 7/8	-1/8
5 3/8	2 1/2	Aileen			113	722	u	5 3/8	5 1/8	5 3/8
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Continued on Page 35

…SE COMPOSITE CLOSING PRICES

Continued from Page 34

12 Month High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
72 1/4	45 3/4	Xerox	3	4.9	14	5473	62 1/8	60 7/8	61 1/4	-1/4
58 1/4	52 3/4	Xerox pf5.45		9.5		5	57 1/4	57 1/4	57 1/4	
28 3/4	20 5/8	XTRA	.64	2.6		67	24 7/8	24 1/2	24 5/8	+1/8
17	13 1/2	Yorkln n				300	13 7/8	13 3/4	13 3/4	-1/8
37	26 1/4	ZaleCp 1.32		3.6		178	36 5/8	36	36 1/4	
12 5/8	3 1/2	Zapata .03j				153	4 7/8	4 5/8	4 7/8	+1/8
91 1/8	47 3/4	Zayre	.64	.8	25	1442	u81 7/8	81	81	-1/8
29 7/8	16 1/4	ZenithE				743	26 5/8	26 1/8	26 1/4	+1/8
36 5/8	17 3/4	ZenLbs .10i		.3	21	1120	32 1/2	31 1/2	31 3/4	-5/8
18 1/4	8 5/8	ZenLb wi				1	16 1/2	16 1/2	16 1/2	
22 5/8	14	Zero s	.29	1.5	18	214	19 7/8	19 5/8	19 5/8	-1/8
65 3/4	32 1/4	Zurmin 1.32		3.3	14	73	40 1/4	40 1/8	40 1/2	

Sales figures are unofficial. Yearly highs and lows reflect the previous 52 weeks plus the current week, but not the latest trading day. Where a split or stock dividend amounting to 25 per cent or more has been paid, the year's high-low range and dividend are shown for the new stock only. Unless otherwise noted, rates of dividends are annual disbursements based on the latest declaration.

a–dividend also extra(s). b–annual rate of dividend plus stock dividend. c–liquidating dividend. cld–called. d–new yearly low. e–dividend declared or paid in preceding 12 months. g–dividend in Canadian funds, subject to 15% non-residence tax. i–dividend declared after split-up or stock dividend. j–dividend paid this year, omitted, deferred, or no action taken at latest dividend meeting. k–dividend declared or paid this year, an accumulative issue with dividends in arrears. n–new issue in the past 52 weeks. The high-low range begins with the start of trading. nd–next day delivery. P/E–price-earnings ratio. r–dividend declared or paid in preceding 12 months, plus stock dividend. s–stock split. Dividends begins with date of split. sls–sales. t–dividend paid in stock in preceding 12 months, estimated cash value on ex-dividend or ex-distribution date. u–new yearly high. v–trading halted. vi–in bankruptcy or receivership or being reorganised under the Bankruptcy Act, or securities assumed by such companies. wd–distributed. wi–when issued. ww–with warrants. x–ex-dividend or ex-rights. xdis–ex-distribution. xw–without warrants. y–ex-dividend and sales in full. yld–yield. z–sales in full.

AMEX COMPOSITE CLOSING PRICES

Closing prices, May 30

Stock	Div	P/E	Sls 100s	High	Low	Close	Chnge
AcmePr		2	13	5 5/8	5 5/8	5 5/8	+1/8
Acton			391	1 7/8	1 1/2	1 3/4	-1/8
AdRusl	.16	23	200	36 3/4	36 1/8	36 3/8	-1/4
Aeronc			129	5 3/8	5 1/4	5 1/4	-1/4
AlliPbs	.44	30	747	u52 3/4	52 1/4	52 3/4	+3/4
AirCal			52	9 3/4	9 1/2	9 1/2	-1/4
ArCalpf1.20			66	12 3/8	12 1/8	12 1/4	+1/8
AlbaW			59	8 1/4	8	8	-1/4
Alphain			204	12	11 1/2	11 3/4	+3/8
Amdahl	.20	29	1040	16 1/2	16 1/4	16 3/8	-1/8
Alsrael	.30e	6	86	u14	13 3/4	14	+1/4
AMzeA	.52		41	18	17 1/2	17 7/8	-1/8
AMzeB	.52		5	18	17 3/4	17 3/4	-1/2
AMBld			165	4 3/4	4 5/8	4 3/4	+1/8
APrec	.24	35	1	18 1/2	18 1/2	18 1/2	+1/8
AmRoyl.71j		3	216	5 3/8	5 1/8	5 1/8	-3/8
AScIE		43	158	9 1/2	9	9	-3/8
Ampal	.06	11	1317	2 1/2	2 3/8	2 1/2	
Andal		14	43	8 1/4	7 7/8	8	+1/4
AndJcb			12	2 1/8	2 1/8	2 1/8	
vjAnglov			40	5/8	5/8	5/8	+1/8
ArgoPt			30	1 1/2	1 3/8	1 1/2	
Arundl		11	2	22 7/8	22 7/8	22 7/8	+1/8
Asmrg	.20		233	7 1/8	6 7/8	7	
Astrotc			332	1 3/4	1 5/8	1 3/4	-1/8
AtlsCM			66	9-16	1/2	9-16	
B B							
BAT	.18e		4180	5 3/4	5 5/8	5 3/4	-1-16
BaryRG		11	10	7	6 7/8	6 7/8	-1/4
BergBr.32b		14	326	29 1/4	28 7/8	29	-1/4
BicCps	.48	15	57	28 7/8	28 1/4	28 3/4	+1/4
BigV	.44	13	3	14 1/8	14	14	+1/8
BinkMf	1	13	31	30 7/8	30 5/8	30 3/4	-1/8
BlountA	.45	38	16	16	16	16	-1/4

Stock	Div	P/E	Sls 100s	High	Low	Close	Chnge
D D							
DWG	.08t		308	2 3/8	2 1/4	2 3/8	
Damson			105	2	1 7/8	2	+1/8
DataPd	.16		409	17 3/8	17	17 3/8	+1/4
Delmed			1317	13-16	11-16	3/4	
DevlCp		76	14	15 1/4	15	15 1/4	+1/4
Digicon			45	1/2	7-16	1/2	+1-16
Dillrds	.12	19	450	43 7/8	43 3/8	43 3/8	-1/4
Diodes		22	11	5 3/8	5 1/2	5 5/8	
DomeP			8024	1 3-16	1 1-16	1 1/8	
Ducom	.80		130	26 1/2	26 1/4	26 1/4	-3/8
E E							
EAC	.40	321	14	8 3/4	8 5/8	8 5/8	-1/8
EagiCl			28	2 3/8	2 3/8	2 3/8	
EstnCo	1	11	4	23	22 7/8	23	+3/8
Estgp	4.17e	11	9	31 1/4	31	31 1/4	+1/2
EchoBg	.12		489	14 1/8	13 3/4	14	+1/4
Elsinor			198	4	3 3/4	4	+1/4
EnrSrv			4	1/2	7-16	7-16	
Espey	.40	13	57	24 7/8	24 1/2	24 3/4	+3/8
F F							
Fabind	.50	12	7	30 1/4	29 3/4	29 3/4	-1/4
Fidata		2	244	6 1/8	5 7/8	6	+1/8
FAusPn			2124	10 5/8	10 1/2	10 5/8	+1/8
FCapHd		30	1022	14 1/2	14 1/8	14 1/4	+3/4
FischP	.93t	16	4	18 1/4	18 1/8	18 1/8	
vjPlanig			2	4 3/8	4 3/8	4 3/8	+1/8
Fluke	1.14t	16	79	27 1/2	26 3/4	26 3/4	-3/8
FthillG			103	5 5/8	5 3/8	5 3/8	-1/4
ForstLs			725	17 3/4	17	17 3/8	-1/8
FreqEl		24	162	u24	23 3/8	23 5/8	+1/4

Stock	Div	P/E	Sls 100s	High	Low	Close	Chnge
HmeGn			811	28 3/4	28 3/8	28 3/4	+1/4
HmeShn			837	85 3/8	83	84	+1/2
Hormls	.56	17	31	u34 1/4	33 3/4	34	+3/8
HmHar			1198	9 5/8	8 7/8	9 3/8	+1/2
HouOT	.98e		177	4	3 3/4	3 7/8	-1/8
Huskyg	.20		717	6	5 7/8	6	
I I							
ImpOilg1.80a			473	30 5/8	30 1/4	30 1/4	-1/8
Inflight			180	3 3/8	d 3 1/4	3 3/8	-1/8
InstSy		9	224	1 7/8	1 3/4	1 7/8	
IntCtyg	.60		270	11 1/8	11	11 1/8	+1/8
Ionics	.12		140	17 3/4	16 3/4	17 3/4	+1

Stock	Div	P/E	Sls 100s	High	Low	Close	Chnge
PetLw			80	11-16	5/8	5/8	-1-16
PionrSy			13	3 7/8	3 3/4	3 7/8	+1/8
PitDsm			99	19	18 3/4	19	+3/4
Pitway 1.80		16	3	u105	105	105	+3/8
PopeEv			101	3 3/8	3 1/4	3 3/8	+1/8
Presld		17	20	3 7/8	3 7/8	3 7/8	-1/8
R R							
Ransbg	.72	25	205	19 1/4	18 3/4	18 3/4	-3/8
Resrt A			914	339	74 1/4	73	73 1/8 -1 1/8
Resrt B			1763	z4300	144 1/2	141	141 -3 1/2
RstAsB		11	147	10	9 5/8	9 7/8	+1/4
RstAsA.15e		9	68	8 3/4	8 1/8	8 3/8	

Stock	Div	P/E	Sls 100s	High	Low	Close	Chnge
Wthfrd			30	1 1/2	1 3/8	1 1/2	
Wellcos		10	30	17 3/4	16 7/8	16 7/8	+1/4
WellAm			9	2	2	2	+1/8
WelGrd			38	3 7/8	3 5/8	3 7/8	
Wstbrg	.20	15	62	13 1/2	13 1/4	13 1/2	
WDigitl		14	439	13 3/4	13 1/8	13 1/2	-1/8
Wichos		57	4104	6 1/4	5 7/8	6 1/4	
Wdstrm	.40	19	6	18 7/8	18 3/4	18 7/8	+3/8
WwdeE			21	2	1 7/8	1 7/8	
X Y Z							
Zimer			75	6 7/8	6 3/4	6 7/8	

OVER-THE-COUNTER

Nasdaq national market, Closing prices, May 30

Stock	Sales (Hnds)	High	Low	Last	Chng
ADCs	121	21 1/4	20 3/8	21 1/4	+3/4
AEL	139	13 3/4	13 3/4	13 3/4	
ASK	1532	13 1/8	12 5/8	13	+1/4
AsmRt	1198	17 3/4	17	17 1/4	-3/4
Acadin t	729	2 15-16	2 7/8	2 7/8	
Acelrtn t	384	13 5/8	13 1/8	13 1/4	+1/4
AcuRay .24	131	28 1/2	28	28 1/4	-1/4
AdacLb	301	1 5-16	1 3-16	1 1/4	+1-16
Adage	15	4 1/4	4 1/8	4 3/8	
Aequitrn	365	6 1/8	5 7/8	6 1/8	+1-16
AffBsh .80	482	17	16 5/8	17	+1/4
AgcyRs t	528	37 1/2	37	37 1/2	+1/2

Stock	Sales (Hnds)	High	Low	Last	Chng
Cintas .15e	16	53 3/4	53 1/4	53 3/4	+1/2
Cipher	637	20 7/8	20 3/8	20 1/2	-1/8
Ciprico t	2	8 5/8	8	8 5/8	+3/8
Circon	113	12	11 3/4	12	
CtzSGa .88	862	27 7/8	27 3/8	27 7/8	+1/8
CtzFlda .80	134	32	31 5/8	32	+1/4
CtzUt A t	27	48 3/4	48 1/4	48 3/4	
CtzUt B 2.16	47	48 1/2	48	48 1/2	+3/4
CityFed .40	877	16 1/8	15 7/8	16 1/8	+1/8
CtyNCp .88b	1038	44 3/4	43 3/4	44 1/4	+1/4
ClarkJ .96	117	31	30 3/4	31	
ClearCh	6	15 3/4	15 1/4	15 3/4	+1/4
ClevtRt 2	12	17	17	17	+1/4

Stock	Sales (Hnds)	High	Low	Last	Chng
FifthTs	119	55	54 1/4	55	+1/2
FiggieB .68	7	56 1/2	55 1/2	55 1/2	
Filtrtks .44	616	17	16 3/4	16 3/4	
Fingmx	105	9	8 7/8	9	+1/8
Finigan	487	18	17 5/8	17 7/8	-1/8
FAlaBk 1.28	610	47 1/4	46 3/4	46 3/4	-1/2
FtAFin .80	44	47 3/4	47	47 1/2	+1/2
FtATns 1	203	30 7/8	30 5/8	30 5/8	
FtColF	232	21	20 1/2	21	
FComC 1.20	92	24 1/2	24 1/4	24 1/2	+1/4
FtCont .79e	6	4 7/8	4 3/4	4 7/8	+1/8
FExec	5702	29	27 7/8	28 7/8	+1
FFCals	12	30 1/2	29 3/4	30 1/2	+3/4

Stock	Sales (Hnds)	High	Low	Last	Chng
LIX	198	12 3/4	12 1/2	12 1/2	
LaPetes	479	23 3/8	22 3/4	23 1/8	+3/8
LaZ By 1.40	9	68	67 1/2	68	+1/2
LadFrs .16a	88	29	28 7/8	28 7/8	-1/8
Laldlw .20	231	18	17 1/2	17 1/2	-1/8
Lancast .72	131	25	24 1/2	24 3/4	
Lanes .80	178	52 1/4	50	52 1/4	+2 1/2
Lawsns .24	110	25 7/4	25 1/2	25 3/4	-1/2
LeeDta	441	8	7 3/4	8	
LewisP .28b	42	8 7/8	8 5/8	8 3/4	+1/8
Lexicns	377	3 7/8	3 5/8	3 3/4	
Liebrt .09	501	30 7/8	29 1/4	30 3/4	+1
LfeCom	2587	10 5/8	10	10 5/8	+1/4

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CURRENCIES, MONEY and CAPITAL MARKETS

FOREIGN EXCHANGES

Dollar no longer talked down

BY COLIN MILLHAM

THE main factor behind the continued strngth of the dollar last week was that the US Administration appears to have stopped trying to talk the dollar down.

President Reagan said the dollar is now at a more competitive level with foreign currencies. This coupled with the recent speech by Mr James Baker, US Treasury Secretary, where he made no reference to the dollar's value against the yen and D-mark, in contrast to earlier calls for a weaker dollar, to correct the US trade deficit, suggests the Administration may be happy with levels of around Y170 and DM 2.30.

A Japanese newspaper reported the existence of a US Government discussion document, arguing that a fall below Y160 would not help correct the US trade deficit, but lead to a stagnation of the Japanese economy, without increasing the amount of US exports to Japan. The discussion paper is believed to recommend a range of Y160 to Y180.

A possible change of attitude towards the dollar was also indicated by intervention by the Federal Reserve to buy dollars in New York on Wednesday. The scale of intervention was small, and was against the yen, possibly on behalf of the Bank of Japan, but it was the first time the US central bank had been seen buying dollars since the Group of Five agreement to weaken the dollar last September. As such, it had a psychological impact on the market, and lifted the dollar.

Support was also provided by last week's economic statistics. On Thursday it was announced that April US leading indicators rose 1.5 per cent, compared with forecasts of around 0.8 per cent. The March rise was revised to 0.9 per cent from 0.5 per cent.

President Reagan's comments about the dollar, and how its fall has begun to correct the US trade deficit, were supported by the April trade figures, published on Friday, although it should be noted it was falling imports, and not rising exports that caused the better figure. Exports fell by 5 per cent from March.

The trade deficit fell to $12.07bn, from the $14.52bn initially stated for March. Although the March figure was revised down on Friday, the April deficit still showed an improvement. This reflected a sharp fall in oil imports, and a cut in imports of manufactured goods.

Most analysts were expecting a deficit of at least $13bn, but will wish to see further evidence of improvement, before being convinced the imbalance in trade against the US has begun to turn, particularly in the light of lower exports in April.

Mr Malcolm Baldrige, US Commerce Secretary, said he expects the deficit to improve in the second half of the year, but sees little effect so far from a lower dollar.

The dollar broke through resistance levels of DM 2.30; SFr 1.90; and Y170 towards the end of last week, to finish at DM 2.3250; SFr 1.9320; and Y174.50 on Friday, the highest levels since mid-April.

A dealer at a large US bank, commented before the release of the US leading indicators and trade figures, that opinion was divided on whether the dollar would go up to DM 2.35 or down to DM 2.22. The figures have made it almost certain that the US currency will go to DM 2.35. With a general election expected in Japan in July, Mr Yasuhiro Nakasone, the Japanese Prime Minister, will also be much happier to see the dollar around Y175, rather than Y160.

£ IN NEW YORK

May 30	Close	Prev. close
£ Spot	$1.4720-4730	$1.4855-1.4865
1 month	0.37-0.36pm	0.36-0.35pm
3 months	1.01-0.98pm	1.10-0.98pm
12 months	2.90-2.80pm	2.91-2.81pm

Forward premiums and discounts apply to the US dollar

CURRENCY MOVEMENTS

May 30	Bank of England Index	Morgan Guaranty Change%
Sterling	76.0	−15.0
U.S. dollar	118.7	+8.9
Canadian dollar	80.0	−11.3
Austrian schilling	124.4	+5.8
Belgian franc	94.5	−7.8
Danish Krone	84.5	−1.8
Deutsche mark	133.2	+13.8
Swiss franc	155.4	+15.3
Guilder	123.5	+8.7
French franc	68.2	−14.0
Lire	45.7	−18.3
Yen	200.5	+46.7

Morgan Guaranty changes: average 1980-1982=100. Bank of England index (base average 1975=100).

OTHER CURRENCIES

May 30	£	$
Arg'tina	1.2680-1.2700	0.8600-0.8610
Aus'alia	2.0650-2.0690	1.3950-1.3970
Brazil	20.30-20.45	13.77-13.84
Finland	7.8570-7.8770	5.3290-5.3310
Greece	211.45-215.95	142.50-145.60
H'kong	11.5675-11.5785	7.8090-7.8110
Iran	119.40*	80.10*
Kuwait	0.4355-0.4365	0.29555-0.29710
Lux'burg	69.70-69.80	47.30-47.40
Malaysia	3.9020-3.9095	2.6370-2.6400
N'Z'land	2.6155-2.6130	1.7670-1.7715
Saudi Ar.	5.3715-5.3815	3.6495-3.6510
Sin'pore	3.3150-3.3285	2.2385-2.2415
S Af. (Cm)	3.4425-3.4690	2.3530-2.3615
S.Af. (Fn)	5.4710-5.6820	3.7040-3.8465
U.A.E.	5.4000-5.4100	3.6715-3.6745

* Selling rate.

CURRENCY RATES

May 30	Bank rate %	Special Drawing Rights	European Currency Unit
Sterling	—	N/A	0.629895
US $	6½	1.143145	0.932430
Canadian $	8.45	*	1.28554
Austria Sch	4	N/A	16.1613
Belgian Fr	8	N/A	44.0060
Danish Kr	7	N/A	7.97321
D'mark	3½	N/A	2.15578
Guilder	4½	N/A	2.42292
French Fr	9½	N/A	6.86502
Lira	12	N/A	1477.44
Yen	3½	N/A	161.683
Norway Kr.	8	N/A	7.26896
Span'h Pta.	—	N/A	137.487
Swedish Kr	8	N/A	6.84870
Swiss Fr	4	N/A	1.78579
Greek Drch	20½	N/A	134.500
Irish Punt	—	N/A	0.709342

* C$/SDR rate for May 29; 1.58875.

POUND SPOT—FORWARD AGAINST POUND

May 30	Day's spread	Close	One month	% p.a.	Three months	% p.a.
US	1.4700-1.4875	1.4720-1.4730	0.40-0.37c pm	3.14	1.06-1.01pm	2.80
Canada	2.0290-2.0508	2.0310-2.0320	0.28-0.20c pm	1.45	0.65-0.51pm	1.14
Nethlnd.	3.83¾-3.85¾	3.84¼-3.85¼	1¼-1⅛c pm	3.89	3⅞-3½pm	3.83
Belgium	69.58-70.12	69.70-69.80	19-14c pm	2.84	47-41pm	2.52
Denmark	12.61-12.69	12.65-12.66	3¾-2½ore pm	2.96	7¾-6¾pm	2.21
Ireland	1.1260-1.1315	1.1260-1.1270	par-0.08p dis	−0.21	par-0.15pm	−0.13
W. Ger.	3.41½-3.43	3.42-3.43	1¾-1½pf pm	5.69	4½-4¼pm	5.11
Portugal	223.59-228.69	223.60-226.80	75-370c dis	−11.87	210-880dis	−9.69
Spain	217.28-218.98	217.90-218.40	25-65c dis	−2.48	55-170dis	−2.06
Italy	2,337¼-2,351½	2,343-2,344	par-5lire dis	−1.28	5-12dis	−1.45
Norway	11.48½-11.56½	11.51-11.52	3½-4⅞ore dis	−4.29	11½-12½dis	−4.08
France	10.86¼-10.92½	10.90¼-10.91¼	2⅞-2⅛c pm	2.65	6½-6pm	2.37
Sweden	10.84½-10.91½	10.86¼-10.87¼	¼pm-¼ore	0.48	⅞-2dis	−0.52
Japan	255¾-257½	256½-257½	1⅛-1y pm	5.25	3½-3⅛pm	5.05
Austria	23.89-24.12	23.90-23.94	10⅝-8⅝gro pm	5.01	28½-25½pm	4.53
Switz.	2.82¾-2.86	2.84-2.85	1¾-1½c pm	6.27	3½-3½pm	5.09

Belgian rate is for convertible francs. Financial franc 70.25-70.35. Six-month forward dollar 1.87-1.82c pm. 12-month 3.00-2.90c pm.

DOLLAR SPOT—FORWARD AGAINST DOLLAR

May 30	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	1.4700-1.4875	1.4720-1.4730	0.40-0.37c pm	3.14	1.05-1.01pm	2.80
Ireland†	1.3055-1.3180	1.3055-1.3065	0.36-0.30c pm	3.01	1.00-0.80pm	2.73
Canada	1.3760-1.3810	1.3800-1.3810	0.18-0.21c dis	−1.70	0.55-0.60d	−1.67
Nethlnd.	2.5910-2.6150	2.6135-2.6145	0.17-0.14c pm	0.72	0.78-0.73pm	1.16
Belgium	47.00-47.45	47.30-47.40	par-2c dis	−0.25	1-3dis	−0.17
Denmark	8.52½-8.59¾	8.59¼-8.59¾	¼ore pm-⅜ dis	−0.09	¼pm-1¼dis	−0.15
W. Ger.	2.3040-2.3260	2.3245-2.3255	0.49-0.46pf pm	2.45	1.44-1.39pm	2.45
Portugal	153½-154¼	154½-154¾	100-250c dis	−13.68	275-675dis	−12.35
Spain	147.18-148.25	148.15-148.25	50-75c dis	−5.09	145-175dis	−4.34
Italy	1,581-1,583	1,581-1,582	4½-7lire dis	−4.35	14½-18dis	−4.10
Norway	7.77-7.82¼	7.81¼-7.82¼	4¼-4¾ore dis	−7.02	13-13½dis	−6.80
France	7.34½-7.41¼	7.40½-7.41	0.20-0.35c dis	−0.45	0.55-0.80d	−0.37
Sweden	7.32¼-7.38¼	7.37¾-7.38¼	1⅞-2¼ore dis	−3.37	5⅞-6⅞dis	−3.24
Japan	172.00-174.55	174.45-174.55	0.37-0.32y pm	2.39	1.01-0.96pm	2.27
Austria	16.21½-16.33½	16.28½-16.29½	3-2gro pm	1.85	8-6pm	1.73
Switz.	1.9100-1.9330	1.9315-1.9325	0.37-0.32c pm	2.16	1.20-1.10pm	2.40

† UK and Ireland are quoted in US currency. Forward premiums and discounts apply to the US dollar and not to the individual currency. Belgian rate is for convertible francs. Financial franc 47.70-47.80.

FORWARD RATES AGAINST STERLING

	Spot	1-month	3-month	6-month	12-month
Dollar	1.4725	1.4687	1.4622	1.4541	1.4430
D-Mark	3.4250	3.4089	3.3800	3.3415	3.2750
French Franc	10.9075	10.8935	10.8425	10.7875	10.7200
Swiss Franc	2.8450	2.8325	2.8090	2.7750	2.7150
Japanese Yen	257.00	255.40	253.80	251.00	246.37

EMS EUROPEAN CURRENCY UNIT RATES

	Ecu central rates	Currency amounts against Ecu May 30	% change from central rate	% change adjusted for divergence	Divergence limit %
Belgian Franc	43 6761	44.0060	+0.76	+0.76	±1.5388
Danish Krone	7.91896	7.97321	+0.69	+0.69	±1.6408
German D-mark	2.13834	2.15578	+0.82	+0.82	±1.1202
French Franc	6.96280	6.86502	−1.40	−1.40	±1.3701
Dutch Guilder	2.40935	2.42292	+0.56	+0.56	±1.5081
Irish Punt	0.712956	0.709342	−0.51	−0.51	±1.6689
Italian Lira	1496.21	1477.44	−1.25	−1.25	±4.0788

Changes are for Ecu, therefore positive change denotes a weak currency. Adjustment calculated by Financial Times.

EURO-CURRENCY INTEREST RATES

May 30	Short term	7 Days notice	1 Month	Three Months	Six Months	One Year
Sterling	10⅛-10⅜	10⅛-10¼	10-10⅛	9{11/16}-9{13/16}	9{11/16}-9¾	9⅞-9{15/16}
U.S. Dollar	6{13/16}-6{15/16}	6{15/16}-7{1/16}	7-7⅛	7-7⅛	7{1/16}-7{3/16}	7¼-7⅜
Can Dollar	8-8½	8-8½	8⅜-8⅝	8⅞-8{11/16}	8⅛-8¾	8¾-9
D Guilder	6⅜-6⅝	6⅜-6⅝	6⅛-6¼	5{13/16}-5{15/16}	5⅝-5¾	5⅝-5¾
Sw. Franc	2¼-2½	3⅛-3⅜	4⅞-5	4{11/16}-4{13/16}	4⅝-4¾	4⅝-4⅞
Deutschmrk	4⅝-4¾	4{9/16}-4{11/16}	4⅝-4¾	4⅝-4{11/16}	4⅝-4¾	4¾-4⅞
Fr. Franc	7⅜-7⅝	7⅜-7½	7⅝-7⅞	7⅝-7⅞	7⅝-7⅞	7½-7⅝
Italian Lire	11-13	12-13½	11-12	11⅛-11⅜	11⅛-11⅜	11⅝-11⅞
B.Fr.(Fin)	7⅝-7⅞	7⅜-7⅝	7¼-7½	7¼-7½	7⅛-7⅜	7⅛-7⅜
B.Fr.(Con)	7¼-7¾	7¼-7¾	7¼-7⅝	7¼-7¾	7-7½	7-7½
Yen	4¾-4{13/16}	4¾-4⅞	4¾-4⅞	4¾-4⅞	4{13/16}-4⅞	4⅞-5
D. Krone	8-8½	8-8½	7¾-8¼	7¾-8¼	7¾-8¼	8-8½
Asian $ (Sng)	7-7⅛	7-7⅛	7-7⅛	7-7⅛	7{1/16}-7{3/16}	7⅛-7¼

Long-term Eurodollars: two years 7¾-8 per cent; three years 8¼-8½ per cent; four years 8½-8¾ per cent; five years 8¾-8⅞ per cent nominal. Short-term rates are call for US dollars and Japanese yen; others, two days' notice.

LIFFE LONG GILT FUTURES OPTIONS

Strike price	Calls—Last				Puts—Last			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

LIFFE US TREASURY BOND FUTURES OPTIONS

Strike price	Calls—Last				Puts—Last			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

LIFFE £/$ OPTIONS

£25,000 (cents per £1)

Strike price	Calls—Last				Puts—Last			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

LONDON SE £/$ OPTIONS

£12,500 (cents per £1)

Strike price	Calls—Last				Puts—Last			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

PHILADELPHIA SE £/$ OPTIONS

£12,500 (cents per £1)

Strike price	Calls—Last				Puts—Last			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

LIFFE—EURODOLLAR OPTIONS

$1m points of 100%

Strike price	Calls—Last				Puts—Last			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

LONDON

20-YEAR 12% NOTIONAL GILT
£50,000 32nds of 100%

	Close	High	Low	Prev
June	[illegible]	[illegible]	[illegible]	[illegible]
Sept	[illegible]	[illegible]	[illegible]	[illegible]
Dec	[illegible]	[illegible]	[illegible]	[illegible]
March	[illegible]	[illegible]	[illegible]	[illegible]

10% NOTIONAL SHORT GILT
£100,000 64ths of 100%

	Close	High	Low	Prev
June	[illegible]	[illegible]	[illegible]	[illegible]
Sept	[illegible]	[illegible]	[illegible]	[illegible]

THREE-MONTH STERLING
£500,000 points of 100%

	Close	High	Low	Prev
June	[illegible]	[illegible]	[illegible]	[illegible]
Sept	[illegible]	[illegible]	[illegible]	[illegible]
Dec	90.96	90.99	90.92	90.99
March	90.98	90.99	90.96	91.01
June	90.93	90.93	90.93	91.01

Estimated volume 2,173 (2,069)
Previous day's open int 17,691 (17,476)

FT-SE 100 INDEX
£25 per full index point

	Close	High	Low	Prev
June	161.00	162.05	160.65	161.50
Sept	163.30	163.80	162.85	163.80
Dec	165.80	—	—	165.30

Estimated volume 486 (767)
Previous day's open int 2,339 (2,300)

THREE-MONTH EURODOLLAR
$1m points of 100%

	Close	High	Low	Prev
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

U.S. TREASURY BONDS
8% $100,000 32nds of 100%

	Close	High	Low	Prev
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CHICAGO

U.S. TREASURY BONDS (CBT) 8%
$100,000 32nd of 100%

	Close	High	Low	Prev
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

U.S. TREASURY BILLS (IMM)
$1m points of 100%

	Close	High	Low	Prev
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CERT. DEPOSIT (IMM)
$1m points of 100%

	Close	High	Low	Prev
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

THREE-MONTH EURODOLLAR (IMM)
$1m points of 100%

	Close	High	Low	Prev
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CURRENCY FUTURES

POUND—$ (FOREIGN EXCHANGE)

Spot	1-mth.	3-mth.	6-mth.	12-mth.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

LIFFE—STERLING £25,000 $ per £

	Close	High	Low	Prev
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

EXCHANGE CROSS RATES

May 30	£	$	DM	YEN	F Fr.	S Fr.	H Fl.	Lira	C $	B Fr.
£	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
$	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DM	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
YEN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
F Fr.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S Fr.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
H Fl.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lira	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C $	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
B Fr.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Yen per 1,000: French Fr per 10: Lira per 1,000: Belg Fr per 100.

MONEY MARKETS

Pressure below the surface

Interest rates are showing little sign of movement at present, although under the surface the pressure is still there for another cut in UK clearing bank base rates.

UK clearing bank base lending rate 10 per cent since May 22

Sterling performed quite well overall last week. The exchange rate index rose 0.2 to 76.0, in spite of a fall of 2.35 cents to $1.4750 in the pound's value against the dollar. Against the D-mark, sterling rose to DM 3.4250 from DM 3.4050; against the French franc to FFr 10.9075 from FFr 10.8350; against the Swiss franc to SFr 2.8450 from SFr 2.82; and in terms of the Japanese yen to Y257 from Y253.75.

This steady performance by the pound, firmer oil prices on the world market, and an April UK trade surplus, against expectations of a deficit, have helped to maintain optimism about lower interest rates.

But the Bank of England is likely to pursue a cautious policy. After the last cut in base rates, the authorities lent money to the discount houses at a penal rate, as a signal for caution. The central bank underlined this view last week, when it again lent funds to the discount houses to relieve part of Wednesday's day-to-day credit shortage.

The lending rate of 10½ per cent for a period of seven days was not particularly onerous, however, since market rates were virtually at that level anyway. But it was a reminder to the market not to push too hard for another cut in rates.

In the next week or so the houses will probably keep as much long-dated paper as possible, and hope that next Tuesday's money supply figures are better than last month's, providing a fresh incentive for base rates of 9½ per cent.

NEW YORK

(4 pm)

Prime rate	8½
Broker loan rate	7¾
Fed funds	6¾
Fed funds at intervention	6¾

Treasury Bills & Bonds	
One month	(—)
Two month	(—)
Three month	6.50
Six month	6.73
One year	6.70
Two year	7.39
Three year	7.59
Four year	7.82
Five year	7.87
Seven year	8.06
10 year	8.05
30 year	7.75

BANK OF ENGLAND TREASURY BILL TENDER

	May 30	May 23		May 30	May 23
Bills on offer	£100m	£100m	Top Accepted rate of discount	9.3456%	9.4860%
Total of applications	£552m	£515m	Average rate of discount	9.3400%	9.4860%
Total allocated	£100m	£100m	Average yield	9.57%	9.72%
Minimum accepted bid	£97.670	£97.653	Amount on offer at next tender	£100m	£100m
Allotment at minimum level	67%	100%			

WEEKLY CHANGE IN WORLD INTEREST RATES

	May 30	change		May 30	change
LONDON			NEW YORK		
Base rates	10	Unch'd	Prime rates	8½	Unch'd
7 day interbank	[illegible]	[illegible]	Federal funds	[illegible]	Unch'd
3mth interbank	[illegible]	[illegible]	3 Mth. Treasury Bills	6.26	−0.08
Treasury Bill Tender	[illegible]	[illegible]	6 Mth. Treasury Bills	6.27	+0.20
Band 1 Bills	[illegible]	[illegible]	3 Mth. C D	6.60	−0.15
Band 2 Bills	[illegible]	[illegible]	FRANKFURT		
Band 3 Bills	[illegible]	[illegible]	Lombard	5.5	Unch'd
Band 4 Bills	[illegible]	[illegible]	One mth. Interbank	4.50	Unch'd
3 Mth. Treasury Bills	[illegible]	[illegible]	Three month	4.575	Unch'd
1 Mth. Bank Bills	[illegible]	[illegible]	PARIS		
3 Mth. Bank Bills	[illegible]	[illegible]	Intervention Rate	7¼	Unch'd
TOKYO			One mth. Interbank	[illegible]	+ 1/16
One month Bills	4.71875	+0.125	Three month	[illegible]	+ 1/16
Three month Bills	4.65625	Unch'd	MILAN		
BRUSSELS			One month	12½	−⅞
One month	7¼	[illegible]	Three month	11½	−¾
Three month	7¼	[illegible]	DUBLIN		
AMSTERDAM			One month	10½	+ 1/16
One month	6½	[illegible]	Three month	10	[illegible]
Three month	[illegible]	[illegible]			

London—band 1 bills mature in up to 14 days, band 2 bills 15 to 33 days, band 3 bills 34 to 63 days and band 4 bills 64 to 91 days. Rates quoted represent Bank of England buying or selling rates with the money market. In other centres rates are generally deposit rates in the domestic money market and their respective changes during the week.

FT LONDON INTERBANK FIXING

(11.00 a.m. May 30)

Three months US dollars		Six months US dollars	
bid 7	Offer 7⅛	bid 7	Offer 7⅛

The fixing rates are the arithmetic means, rounded to the nearest one-sixteenth, of the bid and offered rates for $10m quoted by the market to five reference banks at 11 am each working day. The banks are National Westminster Bank, Bank of Tokyo, Deutsche Bank, Banque Nationale de Paris and Morgan Guaranty Trust.

LONDON MONEY RATES

May 30	Over night	7 days notice	Month	Three Months	Six Months	One Year
Interbank	5-10⅝	10⅛-10⅛	10-10⅛	9¾-9{13/16}	9{9/16}-9¾	9{11/16}-9{13/16}
Sterling CDs	—	—	10-10{1/16}	9{11/16}-9{13/16}	9{9/16}-9{11/16}	9{9/16}-9{11/16}
Local Authority Depos	10¼	10⅛-10¼	10	9⅝-9{13/16}	9⅝	9{9/16}
Local Author'y Bonds	—	—	10⅜	10{1/16}	10	9{13/16}
Discount Mkt Depos.	5-10⅜	10-10¼	9¾	9⅝	—	—
Company Depos.	9⅞-10⅛	10-10⅛	10⅛	9{13/16}	—	—
Finance House Depos	—	—	10⅛	9⅞	9¾	9⅝
Treasury Bills (Buy)	—	—	9{7/16}	9½	—	—
Bank Bills (Buy)	—	—	9{13/16}	9½	9{7/16}	—
Fine Trade Bills (Buy)	—	—	10{7/16}	10⅛	9{13/16}	—
Dollar CDs	—	—	6.85-6.90	6.90-6.95	6.95-7.00	7.10-7.15
SDR Linked Depos	—	—	6⅜-6⅝	6⅜-6⅝	6⅜-6⅝	6{7/16}-6{11/16}
ECU Depos	—	—	7{7/16}-7{9/16}	7{7/16}-7{9/16}	7{7/16}-7{9/16}	7⅛-7¼

Treasury Bills (sell): one-month 9{11/32} per cent; three months 9⅜ per cent. Bank Bills (sell): one-month 9{23/32} per cent; three months 9{7/16} per cent. Treasury Bills: Average tender rate at discount 9.4860 per cent. ECGD Fixed Finance Scheme IV reference date April 2 to May 6 (inclusive) 10.527 per cent.

Local Authority and Finance Houses seven days' notice, others seven days' fixed. Finance House Base Rates 11½ per cent from May 1 1986. Bank Deposit Rate for sums at seven days' notice 4.35-4.375 per cent. Certificates of Tax Deposit (Series 6): Deposit £100,000 and over held under one month 10 per cent; one-three months 9¾ per cent; three-six months 9⅝ per cent; six-nine months 9½ per cent; nine-12 months 9½ per cent. Under £100,000 9⅝ per cent from May 30. Deposits held under Series 5 9¾ per cent. Deposits withdrawn for cash 5½ per cent.

MONEY RATES

May 30	Over night	One Month	Two Months	Three Months	Six Months	Lombard Interv'tn
Frankfurt	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.5
Paris	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7¼
Zurich	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—
Amsterdam	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—
Tokyo	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—
Milan	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—
Brussels	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—
Dublin	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—